THE JOURNAL
OF THE
Kansas Medical Society

Vol. XXV. TOPEKA, KANSAS, DECEMBER, 1925 NO. 12

Published Monthly under direction of the Council. Annual Subscription, $2. Single Copy, 20c.
608 Kansas Avenue, Topeka, Kansas

Entered as second-class matter May 26, 1914, at the Postoffice at Topeka, Kansas, under the Act of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on July 2, 1918.

CONTENTS

ORIGINAL ARTICLES—

The Diagnosis of Cardias Arrhythmias.....395
Sinusitis in Children 397
Some Salient Facts in the Diagnosis of Early Phthisis 398
A Study of Gaits 402
Golf Ethics 406
History of the Kansas Medical Society.....408
Paretic Gold Cure in Poliomyelitis.....411

UNIVERSITY OF KANSAS CLINICS—

Clinic of Frank C. Neff, M.D.....411

EDITORIAL 414

MISCELLANEOUS—

Chips 416
Kansas Medical Laboratory Association.....418
Deaths 420
Personals 420
Societies 420
The Physicians' Home, Inc. 421
Medical School Notes 424
Books 423

Calcium Deficiency

NOT ALONE for the creosote content may CALCREOSE be administered but also for its calcium content. Many physicians are prescribing calcium to overcome a calcium deficiency.

CALCREOSE is a mixture of approximately equal parts of creosote and calcium oxid that can be taken for a long time, and in comparatively large doses without apparently causing any gastro-intestinal disturbance; nor do patients object to its long continued use.

Samples of Tablets on Request
THE MALTBIE CHEMICAL COMPANY
Newark, New Jersey

CALCREOSE

KANSAS STATE LIBRARY

A Medical Education

is seldom completed in college. There is some new development in medical science almost every day. Iletin, radium and x-ray are recent examples. A physician must read to keep abreast of the new appliances and remedies.

As a rule, the FIRST authentic information you obtain regarding the use and price of new instruments; the location of clinics and institutions for special treatment; the **discovery and application of various therapeutic remedies, is found in the advertising** pages of your own STATE MEDICAL JOURNAL.

Here are a few quotations from recent advertisements in the State Journal:

"Our x-ray department includes the new 280,000 volt deep therapy apparatus."

"Gelatin contains 5.9% of lysine, the natural amino-acid so essential to human growth."

"Authorities say the proportion of calories, proteins and calcium is greater in oats, than any other grain."

"Calcreose differs from Creosote in that it apparently does not have any untoward effect on the stomach."

You will surely miss much that is NEW, if you fail to READ THE ADVERTISEMENTS.

THE DEFENSE FUND

OF THE

KANSAS MEDICAL SOCIETY

For the Defense of a Member Against Suits for Alleged Malpractice

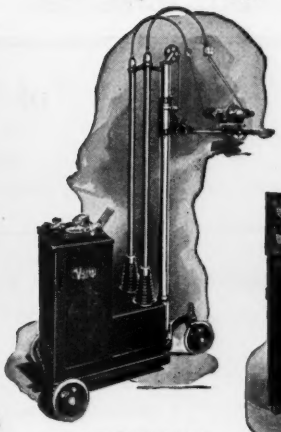
The regular annual dues cover all expense to members.
Furnishes expert legal advice and defense.
Pays all expenses for defense of suit.

No attorney should be employed by a member of the Society who intends to ask the assistance of the Defense Board in defending his case, until he has reported to the chairman or other member of the Board and received advice from him. An attorney is regularly employed by the Board to take charge of all of its legal business and his immediate attention will be given to each case reported. Judgment cannot be taken in cases of this kind until thirty days after filing the suit. This gives abundant time for thorough examination and consultation before filing answer to the complaint.

Secretaries of County Sosieties should have a supply of blank applications for defense on hand.

Defense Board: Chairman, Dr. O. P. Davis, 917 N. Kansas Ave., Topeka, Kan.
Dr. D. R. Stoner, Ellis, Kan.
Dr. C. S. Kenney, Norton, Kan.

Two-Section Mobile Diathermy Apparatus



Stabilized Mobile X-ray Unit—an ideal physician's outfit

"Snook-Special" Combination Diagnostic and Deep Therapy Apparatus for the specialized X-ray laboratory

A Point of View

Quartz Lamp for Ultra-Violet Therapy

"Of all human ambitions an open mind eagerly expectant of new discoveries and ready to remold convictions in the light of added knowledge and dispelled ignorances and misapprehensions, is the noblest and the most difficult to achieve."

—James Harvey Robinson in "The Humanizing of Knowledge"

Wantz Multiple Wave Generator for Sinusoidal and Galvanic Therapy

The Victor X-Ray Corporation owes its leadership in the manufacture of X-ray and physiotherapeutic apparatus to a point of view.

This point of view recognizes the fact that roentgenology and physiotherapeutics are ever evolving new methods which must be reckoned with both by the physician and by the manufacturer of medical apparatus. But what new methods are sufficiently advanced for acceptance in practice the medical profession alone is competent to decide.

Hence, while the Victor X-Ray Corporation keeps abreast of the progress made by medical research it introduces only such apparatus as open-minded physicians are convinced they need.

Thus both medical progress and medical conservatism dictate the character of the roentgenological and physiotherapeutic apparatus developed by the Victor X-Ray Corporation.

Let us advise with you in the selection of X-ray equipment that best meets your individual requirements. If there is some phase of physiotherapy on which you would like authoritative reprinted articles, we have them. You don't obligate yourself to buy when writing us for suggestions or literature. Use the coupon below.

VICTOR X-RAY CORPORATION

Main Office and Factory: 2012 Jackson Blvd., Chicago

33 Direct Branches—Not Agencies—Throughout U. S. and Canada

VICTOR X-RAY CORPORATION, Chicago
Please send me information on X-ray apparatus for

(State range of service desired)

Descriptive Bulletins and Clinical Reprints on:

☐ Quartz Lamps ☐ Sinusoidal Apparatus
☐ Diathermy Apparatus ☐ Galvanic Apparatus
☐ Phototherapy Lamps

*Name*_____

*Address*_____

*City*_____ *State*_____

(A-259-B)

DR. L. O. NORDSTROM
Surgeon
Belleville, Kansas

DOCTORS WILLIAMS AND BOGGS
Eye, Ear, Nose and Throat
Mills Building TOPEKA, KANSAS

HUGH WILKINSON, M. D.
Parctice Limited Exclusively to Surgery and Consultation
430 Brotherhood Bldg., Kansas City, Kansas

THE
KANSAS RADIUM INSTITUTE
618 Mills Bldg
TOPEKA, KANSAS

E. S. EDGERTON, M. D.
Surgeon
Suite 910 Schweiter Bldg. WICHITA, KANSAS

W. F. BOWEN, M. D.
MILTON B. MILLER, M. D.
Surgeons
212 Central National Bank Bldg.
Telephone 6120 Topeka, Kansas

THE
JANE C. STORMONT HOSPITAL
SIXTY BEDS
Both Medical and Surgical Cases Received
Address the Superintendent TOPEKA, KANSAS

OPIE W. SWOPE, M.D.
Radiologist
Superficial and Deep X-Ray Therapy
Radium Therapy X-Ray Diagnosis
713 First National Bank Bldg.,
WICHITA, KANSAS.

DR. OTTO KIENE
Surgeon
CONCORDIA, KANSAS

W. P. CALLAHAN. M. D.
Surgeon
Suite 929
Beacon Building WICHITA, KANS.

DR. LESLIE LEVERICH
Practice limited exclusively to Obstetrics
Normal and Operative
430 Brotherhood Bldg., Kansas City, Kansas

DR. ARTHUR D. GRAY
Mills Building, Topeka, Kansas
GENITO-URINARY DISEASES
AND UROLOGY

DR. WILLIAM E. McVEY
Diseases of
Chest, Throat and Nose
Office Hours, 2 to 5 Telephone 3241
608 Kansas Ave. Topeka, Kansas

Phones: Off., Harrison 2382 Off., Harrison 2380
Res., Delaware 1380 Res., Fairfax 0771
J. L. McDERMOTT, M. D.
C. E. VIRDEN, M. D.
X-Ray and Radium
Suite 1130 Rialto Bldg. Kansas City, Mo.

DRS. MILLARD AND GODDARD
Practice Limited to
DERMATOLOGY
812 Kansas Avenue Topeka, Kansas

J. A. H. WEBB, M.D.
X-Ray
310 Schweiter Bldg., Wichita, Kansas

C. F. MENNINGER, M. S., M. D.
Practice Limited to
Internal Medicine
Mulvane Bldg. TOPEKA

DOCTOR LA VERNE B. SPAKE
Eye, Ear, Nose and Throat
322 Brotherhood Bldg., KANSAS CITY, KAN.

DR. GEO. C. MOSHER
Obstetrics and Gynecology
Hospital Facilities Kansas City, Mo.

J. F. GSELL, M. D.
Eye, Ear, Nose and Throat
Suite 911
The Beacon Building Wichita, Kansas

CHARLES M. BROWN, M. D.
Practice limited to diseases of the
EYE, EAR, NOSE and THROAT
430 Brotherhood Bldg., Kansas City, Kansas

CHAS. S. HERSHNER, M.D
Practice Limited to Diseases of the Rectum
Hospital Facilities Esbon, Kansas

RAYMOND G. HOUSE, M.D.
Practice limited to
Dermatology
405 Schweiter Bldg., Wichita, Kansas

E. A. Reeves, M. D.
Obstetrics and Gynechology
322 Brotherhood Bldg.
Hospital Facilities Kansas City, Kans.

KARL A. MENNINGER, M. S., M. D.
Practice Limited to
Neurology & Psychiatry
Mulvane Bldg. TOPEKA

DR. S. GROVER BURNETT
315 East Tenth Street KANSAS CITY, MO.
Private Sanitarium Care for
MENTAL AND NERVOUS DISEASES, MORPHINISM AND ALCOHOLISM
Phones: Hyde Park, 4800; Harrison, 8990.
Patients met at train on notice

G. W. JONES, A. M., M. D.
Diseases of the Stomach
Surgery and Gynecology
Lawrence Hospital
and Training School LAWRENCE, KANSAS

A. V. LODGE, M. D.
Eye, Ear, Nose and Throat
Suite 906-7 Rialto Bldg.
KANSAS CITY, MO.

ALFRED O'DONNELL, M.D.
Surgeon
ELLSWORTH, KANSAS.

J. F. HASSIG, M. D.
SURGEON
804 Elks Bldg. Kansas City, Kansas

C. S. NEWMAN, M.D.
Surgeon
615 N. Bdwy. Pittsburg, Kan.

EUGENE P. SISSON, M.D.
Diseases of Children
Infant Feeding.
800 Mass. St. Lawrence, Ks.

DEAR DOCTOR:

If you need any supplies—Drugs, Books, Instruments, Surgical Dressings, Electrical Apparatus, Food Preparations—or if you have a patient to send to a hospital, read the Advertisements in this Number before giving your order.

It will make money for the JOURNAL and save money for you.

WICHITA CLINICAL LABORATORY, Wichita, Kansas

All Kinds of Clinical Analyses

Wassermann, Blood Chemistry, Autogenous Vaccines
Information, containers and prices on request.

Wichita Clinical Laboratory.

Phone Market 3664 J. D. Kabler, A B. Director. Schweiter Bldg., Wichita, Kan.

The Trowbridge Training School

A home school for nervous and backward children.
The best in the West.

E. HAYDN TROWBRIDGE, M. D., 900 Chambers Bldg., Kansas City, Mo.

DR. W. T. McDOUGALL

Laboratory for Clinical Diagnosis, Blood Work, Wassermann's, Bacteriological Work, Tissue Examinations.
PASTEUR TREATMENT, 21 doses each with sterile syringe, and ready for administration at the Physician's office.

Both Phones Phone or telegraph orders to DR. W. T. McDOUGALL, Kansas City, Kansas

THE EXCELSIOR SPRINGS SANITARIUM

Excelsior Springs, Mo.

For the treatment of Bright's Disease, Diabetes, Rheumatism and Gastro Intestinal diseases, etc. Diet, Mineral Waters, Mineral Water Baths, Physico Therapy.

R. W. Prather, M. D., Supt.
Medical Directors—C. H. Suddarth, M. D.; J. E. Baird, M. D.; J. E. Musgrave, M. D.

Wards—16 Beds General—27 Rooms

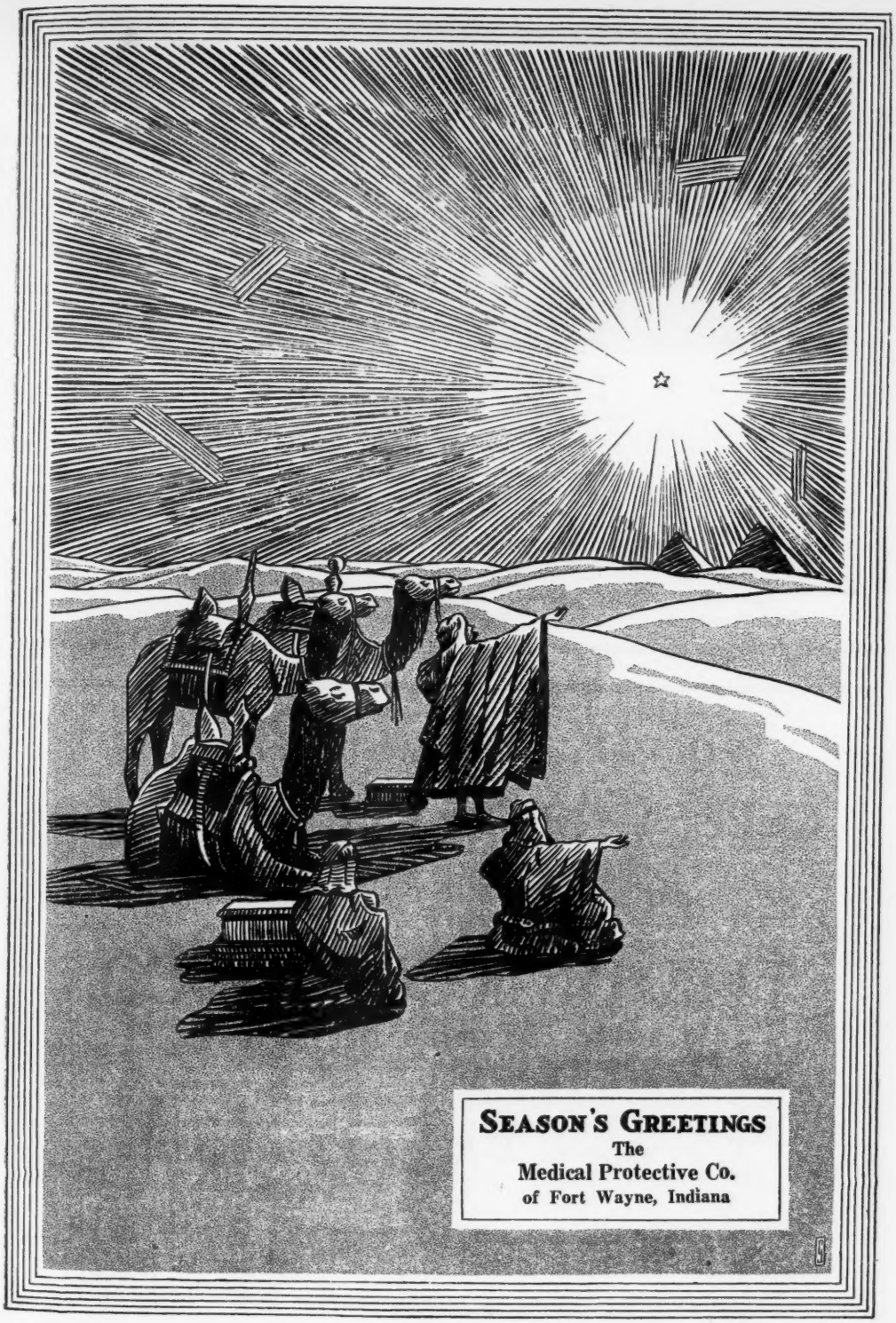
Maternity Department—12 Rooms

Christ's Hospital

TOPEKA, KANSAS

TRAINING SCHOOL
Miss Edith White, Directress

Miss Mary Lovejoy, R. N.
Superintendent


SEASON'S GREETINGS
The
Medical Protective Co.
of Fort Wayne, Indiana

THE RETREAT

Established 1905 **Capacity 50 Beds**

A private sanatorium for the treatment of nervous and mild mental cases. It occupies a twenty-acre tract of natural timber, orchards and gardens in the best residential district of Des Moines. Nine modern buildings offer suitable accommodations for patients, physicians and employes.

All modern and ethical methods for diagnosis and treatment of nervous and mental disorders, including psychotherapy, occupational therapy, hydrotherapy, massage, diet and properly regulated rest, exercise and amusement.

STAFF

Russell C. Doolittle, M. D., Physician in Charge
Julia F. Hill, M. D., Assistant Physician
John C. Doolittle, M. D., General Director
Sydney L. Macmullen, Business Manager.

Literature and prices on request.

28th & Woodland **Des Moines, Iowa** **Phone Drake 85**

Official and Exclusive Distributors

KELLEY-KOETT X-Ray Apparatus

in the State of Kansas

THE DICK X-RAY CO.

542 RIDGE BLDG.

KANSAS CITY, MO.

Everything in X-Ray and Physiotherapy

Burdick Lamps
Morse Wave Generators
Engeln Diathermia Apparatus
Supplies and Service

PARKE, DAVIS AND COMPANY

GLAND PRODUCTS

Specification the Surest Guaranty of Clinical Results

UNIFORM methods cannot be employed for the extraction and desiccation of different glands. The best method of handling each gland must be determined by experiment, the processes of manufacture in each instance being designed with reference to the peculiarities of the particular gland in question to yield a satisfactory finished preparation.

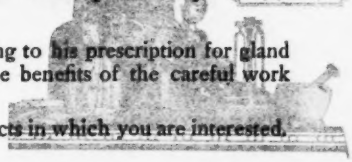
The identity of the gland is of first importance, and this is particularly true of parathyroids. It is very easy to confuse other glands with the true parathyroid glands.

All glands employed by us must be normal. They are all examined for evidence of disease. Before desiccation, all non-glandular matter is removed; this procedure reduces the weight of the glands as they reach us, often to a large extent.

The greatest care is also exercised to select and dissect only that part of the gland which is required in the manufacture of the product, such as the corpus luteum, from ovaries, the anterior lobe from the pituitary body, ovarian residue from ovaries and the posterior lobe of the pituitary. Some glands, such as the thyroid, thymus, pineal, etc., are utilized in entirety. Where fatty tissue is present in excessive quantity it is removed by solvents in a way to prevent injury to the active gland substance.

To still further increase the activity of our gland products we pass the desiccated material, after it has been finely powdered, through sieves to get rid of the remnants of inactive fibrous and connective tissue.

Our gland products therefore represent only the useful parts of the raw material we receive, and for this among other reasons contain a maximum amount of the therapeutically active portion of the glands.



Only by specifying our gland products—by adding to his prescription for gland products the designation "P. D. & Co.," can the benefits of the careful work we do be secured by the prescriber.

We will gladly send literature on the gland products in which you are interested.

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN

HELIOTONE

A New Lamp at a New Price

"HELIOTONE" is built with a new type of base requiring no counterbalances, springs or coils to help with its adjustment. It may be raised from within a few inches from the floor to a height of 7 ft. without any lifting or pulling, simply turn the lever type arm to the required angle where it locks securely in place.

9CJ2385 HELIOTONE LAMP COMPLETE FOR 110 VOLTS A.C. OR D.C. $55.00

Mail This Coupon for Free Trial

FRANK S. BETZ COMPANY, Hammond, Indiana.
6-8 West 48th Street, New York City.
634 South Wabash Avenue, Chicago.
3213 Swiss Avenue, Dallas.

Please send your "Heliotone" Lamp circular explaining your special 30-day free trial introductory offer.

Name .....
Address .....
City..... State.....

The Dupray Laboratory

Pathology, Bacteriology, Serology, Physiological Chemistry, including Blood Chemistry, Basal Metabolism.

Information, containers and prices on request.

HUTCHINSON, KANSAS
306-309 Hoke Bldg.

Wellsworth Rx Service

Covers the Entire Country

No matter where you are—North, East, South or West—you will find a Wellsworth Rx Shop in close proximity. Shops, directed by highly skilled lens grinders render a service of the utmost scientific precision and of a quality such as only Wellsworth can give you—A faithful and accurate fulfillment of your prescription that safeguards your reputation for skilled and reliable services.

Specify Wellsworth on your next prescription

American Optical Company

TOPEKA	HUTCHINSON	WICHITA	SALINA
627 Kansas Ave.	Citizens Bank Building	Bitting Building	104 S. Santa Fe St.

New! A Hand Slit Lamp

As an instrument of differential diagnosis and delicate prognosis, nothing equals the Slit Lamp as developed by Gullstrand, Koeppe and Vogt, and used in conjunction with the Corneal Microscope.

Slit Lamp illumination is the *foundation* of microscopy on the living eye.

Now comes the Hand Slit Lamp of Bausch & Lomb giving the same illumination of the larger instrument but in small compact convenient form.

Under ordinary illumination localization is difficult. With the Slit Lamp it is easy.

This new instrument is *invaluable* not only to the ophthalmic but also to the medical practitioner.

Riggs Optical Company

DENVER
KANSAS CITY, MO.
LINCOLN
OMAHA
PITTSBURG, KAN.
SALINA
WICHITA

TRADE NONSPI MARK

(An Antiseptic Liquid)

For

Excessive Armpit Perspiration

You can use it and recommend it to your patients with absolute confidence

Send for free testing samples

THE NONSPI COMPANY
2695 Walnut Street, Kansas City, Mo.,
Send free NONSPI samples to:
*Name*_____
*Street*_____
*City*_____ *State*_____

James the Janitor Speaks.

By Dr. J. R. Scott
of Ottawa, Kansas.

A snappy discussion of Fees, Choosing of a Physician, Operations, Patent Medicines and Irregulars.

A Tribute to the Country Doctor.

EDUCATIONAL

A booklet for the laity.

For your waiting room table and for your patients to read and take away.

Single copy 25 cents, one dozen $1.50, by the hundred 6 cents each.

A. R. F. SERVICE,
OTTAWA, KANSAS

Want X-Ray Supplies "P-D-Q"?

There are over 30 District Branches now established by the Victor X-Ray Corporation throughout U. S. and Canada. These branches maintain a complete stock of supplies, such as X-ray films, dark room supplies and chemicals, barium sulphate, cassettes, screens, Coolidge tubes, protective materials, etc., etc. Also Physical Therapy supplies.

The next time you are in urgent need of supplies place your order with one of these Victor offices, conveniently near to you. You will appreciate the prompt service, the Victor guaranteed quality and fair prices.

Also facilities for repairs by trained service men. Careful attention given to Coolidge tubes and Uviarc quartz burners received for repairs.

VICTOR X-RAY CORPORATION
Main Office and Factory: 2012 Jackson Blvd., Chicago
Kansas City Branch - - 208 Y. W. C. A. Bldg.

"IMPERMO"

The new material which solves your developing tank problems. Light in weight — non-corrosive — acid-proof. An exclusive Victor product, backed by the Victor guarantee.
Made in six sizes. Send for catalog.

Quality Dependability Service Quick-Delivery
~ ~ *Price Applies to All* ~ ~

Duke's New Book On ALLERGY

Will Help You

RELIEVE SUFFERING THAT OFTEN LASTS FROM CHILDHOOD TO OLD AGE

In the preparation of this book, the author has been careful to present the subject in the simplest, briefest way compatible with clearness. His experience in the study of hypersensitiveness has brought about a realization of the tremendous importance of a better understanding of this subject.

Allergy can last from childhood to old age. To know how to handle this disease would, therefore, be a boon to the many now suffering from it.

The data offered in this book have been obtained entirely from cases observed in consulting medical office practice, and every case review (over 500 in number) has been studied from a general point of view.

ALLERGY

By W. W. DUKE, Ph. B., M. D.
Kansas City, Mo.

Look at This Table of Contents

PART I.

A Discussion of Experimental Anaphylaxis. Serum Sickness, Bacterial Allergy, and Illnesses in Human Beings Traceable to Specific Hypersensitiveness to Material Agents.
Introduction
Experimental Anaphylaxis (Early Development)
Experimental Anaphylaxis (Later Development)
Experimental Anaphylaxis (Continued)
Serum Sickness
Bacterial Allergy
Natural Hypersensitiveness in Human Beings (General Discussion)
The Relationship Between Hypersensitiveness and Other Diseases
The Nature of Agents Which Sensitize Human Beings and the Factor Mode of Contact
Pollen Abundance and Pollen Disease (A Botanic Survey of Kansas City, Missouri)
Primary Causes of Reaction Other Than Pollen
Contributary Causes of Reaction
General Characteristics of Reaction
Symptoms of Reaction
Specific Diagnosis
Specific, Nonspecific and Symptomatic Treatment

PART II.—Physical Allergy

Physical Allergy—Introduction
Contact Reaction Caused by Light, Heat, Cold and Mechanical Irritants
Reflex-like Reactions Caused by Heat, Cold and Light
Concluding Chapter
Bibliography

Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction

THE subject is interesting theoretically and important practically. From a theoretical viewpoint, one may well marvel at the fact that a commonly eaten food, such as egg, can, to a sensitive individual, rank with the most violent poisons known to medical science. From a practical viewpoint, one surely should profit by acquaintance with a type of illness which affects in slight or marked degree about fifteen per cent of individuals. It is met with each day by physicians who have large practices.

Reaction may manifest itself in practically every tissue and in practically every organ, and simulate in almost any locality the effect of functional or organic disease. For this reason, the phenomenon should be known and looked for by physicians in every line of work if they wish to reduce error to the minimum.

Few More Puzzling Subjects

There are few conditions met with in the practice of medicine more varied as to cause, symptomatology or cure and few which require more painstaking study if a majority of the cases, either mild or severe, are to be correctly diagnosed and then partly or completely relieved.

The C. V. Mosby Company
3616 Washington Blvd. St. Louis, Mo.

Clip and Mail now ! !
C. V. Mosby Co.—Medical Publishers,
3616 Washington Blvd., St. Louis, Mo.

Send me a copy of Duke—Allergy.
I enclose check for $5.50.
Charge to my account.
(Cross out one)

Name.....

Street.....

City..... State.....

(Jr. Kan. Med. Soc.)

INFANT DIET MEAD'S MATERIALS

Feeding Babies in Winter

Neither cow's milk nor breast-milk contains sufficient antirachitic power to protect all infants from RICKETS.

Also—during the winter months, babies are usually not exposed to a sufficient amount of sunlight to prevent RICKETS.

The prescribing of MEAD'S STANDARDIZED AND BIOLOGICALLY-ASSAYED COD LIVER OIL by the physician is one of the most valuable safeguards against RICKETS.

MEAD'S is not an ordinary COD LIVER OIL. Every step in its preparation, from the time the fish are caught until the oil is finally tested and bottled, is scientifically controlled. Its purity and potency is guaranteed.

Samples and literature furnished immediately on request.

The Mead Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

MEAD JOHNSON & COMPANY, Evansville, Indiana, U. S. A.
Manufacturers of Infant Diet Materials

THE JOURNAL
of The
Kansas Medical Society

Vol. XXV. TOPEKA, KANSAS, DECEMBER, 1925 NO. 12

The Diagnosis of Cardiac Arrhythmias.

W. R. DILLINGHAM, M.D., Salina.

(Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.)

The diagnosis of cardiac arrhythmias by instrmental means is a comparatively simple thing for those whose practice is extensive enough to warrant the possession of expensive armamentarium. Fortunately most types of cardiac and pulse irregularities can be accurately diagnosed by ordinary means of physical examination. Careful study of the results obtained by graphic methods and comparison with the physical findings have enabled clinicians to formulate rules which have simplified the diagnosis and classification of these irregularities.

In arriving at a diagnosis of an arrhythmia a careful history is most important. It will reveal whether there is some original fault in the heart's equipment; whether the heart has undergone undue strain or has been exposed to the toxins of infectious diseases; and whether the other systems of the body are exerting a harmful influence on the heart's action.

The cardiac impulse to contraction originates in the "sinus node" at the venous-auricular junction, the "pace-making area."

While all portions of the heart's muscle are inherently rhythmic, under normal conditions only the "pace-maker" initiates contractions. Impulses to contraction leave the pace-making area with regularity. This regularity makes up the "dominant rhythm" of the heart. The rapidity with which the impulses are liberated is governed by the vagus. Contraction waves flow over the auricles to the auriculo-ventricular node at the auriculo-ventricular junction through which they transmit their stimuli down the right and left branches of the auriculo-ventricular bundle. Each branch goes to its respective ventricle.

In the young, the most common irregularity of the heart rate is sinus arrhythmia. It is a physiological phenomenon during childhood and is easily diagnosed because it waxes and wanes with expiration and inspiration respectively. It is often found as a normal variation in the middle aged especially upon forced respiration. Pathalogical types, however, do not show this correlation between respiration and heart rate and are diagnosed by the comparative slow pulse rate with irregularly long diastolic pauses and by taking into account the fact that sinus arrhythmias are abolished when the rate is increased by exercise and become again pronounced during rest. As it does not depend upon intracardiac causes, physical examination of the heart detects no sign of disease. Its cause is outside the heart acting through the vagus on the sinoauricular node.

Simple tachycardia is due to lowered or diminished vagus tone at the pace-maker. It ordinarily presents no difficulty in diagnosis. The gradual acceleration of the pulse rate and the gradual return to its former level makes the diagnosis certain.

It is characteristic of paroxysmal tachycardia that the acceleration of the heart rate is abrupt. The impulses to contract in paroxysmal tachycardia orginate in an ectopic focus any place below the normal pace-maker and so are without vagus control. The ectopic focus suddenly assumes the role of pace-maker and as abruptly yields again to the normal area. During an attack the rate is rapid and remarkably constant and is uninfluenced by rest, posture or exercise. The duration is variable. It may last only a few beats or may persist for days.

Premature contractions, or extra systoles, arise from an extopic focus, out side the pace-maker and under various abnormal conditions. Before the normal impulse from the pace-maker has had time to reach the hyperirritable focus it has liberated an impulse to contraction, and the normal rhythm is interrupted by a prematurely occurring contraction. The interval between the premature beat and the succeeding beat is longer than the normal interval. The patient is often conscious of the beat that follows the pause. His description of his sensations are usually so clear that the physician can often diagnose this irregularity while listening to his story. Extra systoles are often transient. They ordinarily disappear if the heart rate

is increased by exercise. They are rarely found if the rate is higher than 120 per minute. Isolated extra systoles once in several normal beats followed by long pauses, present no difficulty in diagnosis. Their recognition, however, becomes more difficult when they occur in showers.

Under certain abnormal conditions auricular movements take place at a rate far above the normal limits and with great regularity. The contractions are not under the influences ordinarly exercised by the pace-maker nor under control of the vagus. Various causes have been assigned auricular flutter, but there appears to be a circus movement established in the musculature of the auricle. At times it is impossible to diagnose the condition without instrumental means, but usually there are clinical indications and findings which suggest the presence of flutter and render the diagnosis fairly certain. The condition is characterized by rhythmic auricular movements of high rate, usually above 300 per minute. It tends to persist for long periods of time, and the rate is remarkably constant. The condition is most commonly found in individuals of advancing years with arteriosclerosis and is uninfluenced by exercise, rest or posture. The pulse is usually regular. When irregularity appears it is due to imperfect blocking of the auricular impulses. The latter irregularity disappears with exercise. In those exceptional cases in which the veins of the neck are greatly distended by each auricular systole, the diagnosis becomes evident on inspection and estimation of the rapidity of the jugular pulsation. These pulsations are minute and scarcely distinguishable as separate beats but they are usually sufficiently distinct to permit an estimation of the rate.

In auricular fibrillation the orderly sequence of auricular systole does not take place. The auricular muscle quivers and twitches in various places in extreme disorder which affects ventricular activity in a characteristic way. In typical auricular fibrillation ventricular activity is completely irregular in rhythm and force so that no two successive beats are alike and a grossly irregular pulse is produced. The irregularity becomes increased during exercise. It is essentially a terminal phase of chronic heart disease; it may be prolonged for some time, but it marks a certain failure of the auricular musculature. It is diagnosed by a pulse which is rapid in rate and completely irregular in both force and rhythm.

The inherent rhythmicity of the ventricle is of a lesser degree than that of the auricle, but it is of sufficient degree to cause the contraction of that chamber when it is cut off from auricular influence. The normal conduction of an impulse from the auricle to the ventricle requires a certain period of time. If the conducting bundle be diseased the transmission of the auricular impulse may be delayed beyond the normal time, resulting in partial heart block, or may fail to reach the ventricle at all, resulting in complete heart block. In the latter event the auricle will beat regularly in response to the rhythmic impulses from the pace-maker, while the ventricle, receiving no impulses from above, beats in accordance with its own inherent rhythmicity, slowly and regularly. A slow regular rhythm at a rate below 40 per minute indicates complete heart block.

In attempting to diagnose abnormalities of the heart beat without instrumental means certain generalizations should be kept in mind. It is of value to examine both the heart and the pulse: of these more can be learned from the heart. When the heart action is irregular one should determine if there be a predominant rhythm. It there be no such predominant rhythm, the arrhythmia is probably due to auricular fibrillation. This probability increases if the rate is high.

It should be determined whether each ventricular beat produces a radial pulse. Neither sinus arrhythmia nor heart block produces a pulse deficit. Auricular fibrillation produces a pulse deficit. In doubtful cases with slow rate, the effect of exercise on the rate and rhythm should be noted. If the arrhythmia becomes more pronounced at the higher rate the probability of fibrillation is increased. Occasional interruptions to an established rhythm are usually due to premature contractions, or to partial heart block; more likely to the former.

Regular rapid ventricular action which remains of constant rate day after day, and which is uninfluenced by exercise, posture or rest is probably due to flutter or to paroxysmal tachycardia. If the rate is less than 100 it is almost surely 4:1 flutter. Paroxysms of tachycardia are usually of brief duration; flutter usually persists.

R

At the recent meeting of the Southern Medical Association at Dallas, Texas, Dr. H. L. Dwyer was elected secretary of the section for Diseases of Children.

Sinusitis in Children.

LAVERNE B. SPAKE, M.D., Kansas City.

(Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.)

Sinusitis in children is one of the most prevalent conditions with which we have to deal, especially where the climatic conditions are changeable and much moisture is present; this often predisposes our children to sinus diseases. Children seem to be particularly susceptible to colds, or rhinitis, due to the fact that the sinuses, with the exception of the sphenoids, are hardly more than indentations in the cancellous bone during the early years of childhood. They are primary evaginations of the nasal mucous membrane and develope by the growth of the sacs and absorption of the bone from nasal sinuses.

On an anatomical basis the sphenoid at birth has no clinical significance; after three years, development is very fast, until at the age of ten they are of adult size.

The frontal sinus has no clinical significance until the age of five, if no ethomid cells extend into the frontal bone at birth there will be no frontal sinus, the ethmoid cells become frontal cells as soon as they invade the frontal bone. Any involvement before five or six years of age would be considered ethmoiditis.

The maxillary sinus is rarely absent, it may have clinical significance at birth and develop rapidly up to the eighth year, then more slowly, reaching adult size at fifteen.

The ethmoids are always present at birth, divided into two groups: anterior and posterior, and have clinical significance.

Until recent years sinusitis in infants and children was diagnosed only, when accompanied by complication such as orbital abscess, abscess of the cheek, or mouth, eye conditions, ulcer of cornea, uveitis, optic neuritis, meningitis, pulmonary and systemic condition, and infectious arthritis.

Emil Myers, Coffin, and Oppenheimer were pioneers in this field, but L. W. Dean, of University of Iowa, I believe, has written more than any one in this country and deserves most of the credit for bringing it so forcibly before the profession and from practicable every day point of view.

The most common source of infection is from diseased tonsils and adenoids. Not only do they infect the sinuses by direct contiguity of tissue and through the lymphatics, but mechanically cause infection of the sinuses, acting as a trap for secretion which is driven backwards into the nose from the naso-pharynx. Adenoids in this way may keep, in the upper part of the nose, constantly a mass of secretion, which being stagnant, would soon become mucopurulent, and infect the sinuses.

The acute infectious diseases are very important etiological factors; influenza, scarlet fever, measles and diphtheria. Deviated septum in the older is often an important factor.

We are more apt to have involvement of the underlying bony wall of child than in adult acording to Dr. Armstrong, due probably to primary infection being overlooked and only in those cases where there is destruction of bone and subsequent spreading of the inflammation to the soft tissues of the face is it brought to the notice of the physician.

The two prominent symptoms are nasal discharge and nasal stoppage. First ruling out foreign bodies, rhinolith, atrophic rhinitis, syphilis, and tuberculosis.

The discharge may not be noticed, may be post nasal, a chronic cough, productive or non-productive may be present, and a prominent symptom. If pus is found in the nose in the neighborhood of ostium of a sinus, and is wiped away and reappears in a few minutes, suppurative sinus disease is present because the mucous membrane cannot so soon produce the purulent secretion. In closed empyema where the outlet is blocked, pus may not be present. Sneezing is a very common symptom in infants. Fever may be present, may reach 105 degrees. Pain and headaches are present in closed empyema. Children under six years seldom complain of headaches.

Very suggestive of chronic paranasal sinus disease is a condition characterized by listlessness, poor appetite, under-weight, poor color, so commonly caused by diseased tonsils and adenoids, which persist after their removal, all other conditions negative, should cause us to think of chronic sinus infections.

All cases in children where we have asthma, chronic bronchitis, arthritis, cardiac lesion, nephritis, and deafness, the sinuses certainly call for a thorough investigation, it is sometimes very hard to say that there is no sinus trouble, it may take weeks to come to a proper diagnosis.

During the past year we have noted the predominating symptoms that brought the patients to us, which has proven sinus disease.

Take cold easily (nasal discharge)	22
Otitis media	4
Deafness	3
Mouth breathers	19

Hill (The Lancet, 1925, ii., 317), he describes a simple apparatus for daily use which depends on the production of fluorescence on a uranium screen by ultra-violet rays which have passed through a Chance filter. He also records results of exposing photographic printing-paper to the rays of a standard lamp when different filtering media are employed. The results obtained with a lamp to be tested may be compared with the standard—The Lancet.

———R———

Increase in Death Rate

The death rate for Oregon in 1924, according to the Department of Commerce, was 1,139 per hundred thousand of population, as against 1,094 in 1923. The increase was due largely to increases in diseases of the heart and in nephritis, cancer, measles, diabetes and diphtheria.

———R———

Infantile Paralysis Epidemic

Following a conference of the city health officer of Louisville, Ky., with physicians, an order wass issued closing the public schools, October 22, on account of an outbreak of infantile paralysis in that city. There had then been, it is reported, nineteen cases and four deaths. There were six cases of infantile paralysis in Owensboro also, October 22, with two deaths.

———R———

Required by the Act of Congress of August 24, 1912, of the Journal of the Kansas Medical Society, Published Monthly at Topeka, Kansas, for October 1, 1925.

State of Kansas, County of Shawnee, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared W. E. McVey, who having been duly sworn according to law, deposes and says that he is the editor of the Journal of the Kansas Medical Society and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of	Post Office Address
Publisher—W. E. McVey, under direction of the Council of the Kansas Medical Society	Topeka, Kansas
Editor—W. E. McVey	Topeka, Kansas
Managing Editor—None.	
Business Manager—None.	

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Kansas Medical Society, F. A. Carmichael, Osawatomie, Kansas, President; Dr. J. F. Hassig, Kansas City, Kansas, Secretary; Dr. Geo. M. Gray, Kansas City, Kansas, Treasurer.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relations, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

W. E. McVEY, Editor.

Sowrn to and subscribed before me this 23rd day of September, 1925.

EVANGELINE INGERSOLL,
(Seal) Notary Public.

(My commission expires April 15, 1929.

———R———

Examination of a half million school children proved that physical defects occur more frequently in rural than in urban pupils.

FOR SALE—Central S. Dakota—General practice averaging $6,500.00 for ten years, with or without modern office building, county seat modern town of 1200. Main line railroad. Appointments transferable. Protestant not over 35 desired. Will sell all or one-half and other half in six months. Only first class man considered. Price upon application. Address Lang—in care of the Journal.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

THE JOURNAL
of The
Kansas Medical Society

Vol. XXV. TOPEKA, KANSAS, DECEMBER, 1925 NO. 12

The Diagnosis of Cardiac Arrhythmias.

W. R. DILLINGHAM, M.D., Salina.

(Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.)

The diagnosis of cardiac arrhythmias by instrmental means is a comparatively simple thing for those whose practice is extensive enough to warrant the possession of expensive armamentarium. Fortunately most types of cardiac and pulse irregularities can be accurately diagnosed by ordinary means of physical examination. Careful study of the results obtained by graphic methods and comparison with the physical findings have enabled clinicians to formulate rules which have simplified the diagnosis and classification of these irregularities.

In arriving at a diagnosis of an arrhythmia a careful history is most important. It will reveal whether there is some original fault in the heart's equipment; whether the heart has undergone undue strain or has been exposed to the toxins of infectious diseases; and whether the other systems of the body are exerting a harmful influence on the heart's action.

The cardiac impulse to contraction originates in the "sinus node" at the venous-auricular junction, the "pace-making area."

While all portions of the heart's muscle are inherently rhythmic, under normal conditions only the "pace-maker" initiates contractions. Impulses to contraction leave the pace-making area with regularity. This regularity makes up the "dominant rhythm" of the heart. The rapidity with which the impulses are liberated is governed by the vagus. Contraction waves flow over the auricles to the auriculo-ventricular node at the auriculo-ventricular junction through which they transmit their stimuli down the right and left branches of the auriculo-ventricular bundle. Each branch goes to its respective ventricle.

In the young, the most common irregularity of the heart rate is sinus arrhythmia. It is a physiological phenomenon during childhood and is easily diagnosed because it waxes and wanes with expiration and inspiration respectively. It is often found as a normal variation in the middle aged especially upon forced respiration. Pathalogical types, however, do not show this correlation between respiration and heart rate and are diagnosed by the comparative slow pulse rate with irregularly long diastolic pauses and by taking into account the fact that sinus arrhythmias are abolished when the rate is increased by exercise and become again pronounced during rest. As it does not depend upon intracardiac causes, physical examination of the heart detects no sign of disease. Its cause is outside the heart acting through the vagus on the sinoauricular node.

Simple tachycardia is due to lowered or diminished vagus tone at the pace-maker. It ordinarily presents no difficulty in diagnosis. The gradual acceleration of the pulse rate and the gradual return to its former level makes the diagnosis certain.

It is characteristic of paroxysmal tachycardia that the acceleration of the heart rate is abrupt. The impulses to contract in paroxysmal tachycardia orginate in an ectopic focus any place below the normal pace-maker and so are without vagus control. The ectopic focus suddenly assumes the role of pace-maker and as abruptly yields again to the normal area. During an attack the rate is rapid and remarkably constant and is uninfluenced by rest, posture or exercise. The duration is variable. It may last only a few beats or may persist for days.

Premature contractions, or extra systoles, arise from an extopic focus, out side the pace-maker and under various abnormal conditions. Before the normal impulse from the pace-maker has had time to reach the hyperirritable focus it has liberated an impulse to contraction, and the normal rhythm is interrupted by a prematurely occurring contraction. The interval between the premature beat and the succeeding beat is longer than the normal interval. The patient is often conscious of the beat that follows the pause. His description of his sensations are usually so clear that the physician can often diagnose this irregularity while listening to his story. Extra systoles are often transient. They ordinarily disappear if the heart rate

is increased by exercise. They are rarely found if the rate is higher than 120 per minute. Isolated extra systoles once in several normal beats followed by long pauses, present no difficulty in diagnosis. Their recognition, however, becomes more difficult when they occur in showers.

Under certain abnormal conditions auricular movements take place at a rate far above the normal limits and with great regularity. The contractions are not under the influences ordinarly exercised by the pace-maker nor under control of the vagus. Various causes have been assigned auricular flutter, but there appears to be a circus movement established in the musculature of the auricle. At times it is impossible to diagnose the condition without instrumental means, but usually there are clinical indications and findings which suggest the presence of flutter and render the diagnosis fairly certain. The condition is characterized by rhythmic auricular movements of high rate, usually above 300 per minute. It tends to persist for long periods of time, and the rate is remarkably constant. The condition is most commonly found in individuals of advancing years with arteriosclerosis and is uninfluenced by exercise, rest or posture. The pulse is usually regular. When irregularity appears it is due to imperfect blocking of the auricular impulses. The latter irregularity disappears with exercise. In those exceptional cases in which the veins of the neck are greatly distended by each auricular systole, the diagnosis becomes evident on inspection and estimation of the rapidity of the jugular pulsation. These pulsations are minute and scarcely distinguishable as separate beats but they are usually sufficiently distinct to permit an estimation of the rate.

In auricular fibrillation the orderly sequence of auricular systole does not take place. The auricular muscle quivers and twitches in various places in extreme disorder which affects ventricular activity in a characteristic way. In typical auricular fibrillation ventricular activity is completely irregular in rhythm and force so that no two successive beats are alike and a grossly irregular pulse is produced. The irregularity becomes increased during exercise. It is essentially a terminal phase of chronic heart disease; it may be prolonged for some time, but it marks a certain failure of the auricular musculature. It is diagnosed by a pulse which is rapid in rate and completely irregular in both force and rhythm.

The inherent rhythmicity of the ventricle is of a lesser degree than that of the auricle, but it is of sufficient degree to cause the contraction of that chamber when it is cut off from auricular influence. The normal conduction of an impulse from the auricle to the ventricle requires a certain period of time. If the conducting bundle be diseased the transmission of the auricular impulse may be delayed beyond the normal time, resulting in partial heart block, or may fail to reach the ventricle at all, resulting in complete heart block. In the latter event the auricle will beat regularily in response to the rhythmic impulses from the pacemaker, while the ventricle, receiving no impulses from above, beats in accordance with its own inherent rhythmicity, slowly and regularly. A slow regular rhythm at a rate below 40 per minute indicates complete heart block.

In attempting to diagnose abnormalities of the heart beat without instrumental means certain generalizations should be kept in mind. It is of value to examine both the heart and the pulse: of these more can be learned from the heart. When the heart action is irregular one should determine if there be a predominant rhythm. It there be no such predominant rhythm, the arrhythmia is probably due to auricular fibrillation. This probability increases if the rate is high.

It should be determined whether each ventricular beat produces a radial pulse. Neither sinus arrhythmia nor heart block produces a pulse deficit. Auricular fibrillation produces a pulse deficit. In doubtful cases with slow rate, the effect of exercise on the rate and rhythm should be noted. If the arrhythmia becomes more pronounced at the higher rate the probability of fibrillation is increased. Occasional interruptions to an established rhythm are usually due to premature contractions, or to partial heart block; more likely to the former.

Regular rapid ventricular action which remains of constant rate day after day, and which is uninfluenced by exercise, posture or rest is probably due to flutter or to paroxysmal tachycardia. If the rate is less than 100 it is almost surely 4:1 flutter. Paroxysms of tachycardia are usually of brief duration; flutter usually persists.

———B———

At the recent meeting of the Southern Medical Association at Dallas, Texas, Dr. H. L. Dwyer was elected secretary of the section for Diseases of Children.

Sinusitis in Children.

LAVERNE B. SPAKE, M.D., Kansas City.

(Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.)

Sinusitis in children is one of the most prevalent conditions with which we have to deal, especially where the climatic conditions are changeable and much moisture is present; this often predisposes our children to sinus diseases. Children seem to be particularly susceptible to colds, or rhinitis, due to the fact that the sinuses, with the exception of the sphenoids, are hardly more than indentations in the cancellous bone during the early years of childhood. They are primary evaginations of the nasal mucous membrane and develope by the growth of the sacs and absorption of the bone from nasal sinuses.

On an anatomical basis the sphenoid at birth has no clinical significance; after three years, development is very fast, until at the age of ten they are of adult size.

The frontal sinus has no clinical significance until the age of five, if no ethomid cells extend into the frontal bone at birth there will be no frontal sinus, the ethmoid cells become frontal cells as soon as they invade the frontal bone. Any involvement before five or six years of age would be considered ethmoiditis.

The maxillary sinus is rarely absent, it may have clinical significance at birth and develop rapidly up to the eighth year, then more slowly, reaching adult size at fifteen.

The ethmoids are always present at birth, divided into two groups: anterior and posterior, and have clinical significance.

Until recent years sinusitis in infants and children was diagnosed only, when accompanied by complication such as orbital abscess, abscess of the cheek, or mouth, eye conditions, ulcer of cornea, uveitis, optic neuritis, meningitis, pulmonary and systemic condition, and infectious arthritis.

Emil Myers, Coffin, and Oppenheimer were pioneers in this field, but L. W. Dean, of University of Iowa, I believe, has written more than any one in this country and deserves most of the credit for bringing it so forcibly before the profession and from practicable every day point of view.

The most common source of infection is from diseased tonsils and adenoids. Not only do they infect the sinuses by direct contiguity of tissue and through the lymphatics, but mechanically cause infection of the sinuses, acting as a trap for secretion which is driven backwards into the nose from the naso-pharynx. Adenoids in this way may keep, in the upper part of the nose, constantly a mass of secretion, which being stagnant, would soon become mucopurulent, and infect the sinuses.

The acute infectious diseases are very important etiological factors; influenza, scarlet fever, measles and diphtheria. Deviated septum in the older is often an important factor.

We are more apt to have involvement of the underlying bony wall of child than in adult acording to Dr. Armstrong, due probably to primary infection being overlooked and only in those cases where there is destruction of bone and subsequent spreading of the inflammation to the soft tissues of the face is it brought to the notice of the physician.

The two prominent symptoms are nasal discharge and nasal stoppage. First ruling out foreign bodies, rhinolith, atrophic rhinitis, syphilis, and tuberculosis.

The discharge may not be noticed, may be post nasal, a chronic cough, productive or non-productive may be present, and a prominent symptom. If pus is found in the nose in the neighborhood of ostium of a sinus, and is wiped away and reappears in a few minutes, suppurative sinus disease is present because the mucous membrane cannot so soon produce the purulent secretion. In closed empyema where the outlet is blocked, pus may not be present. Sneezing is a very common symptom in infants. Fever may be present, may reach 105 degrees. Pain and headaches are present in closed empyema. Children under six years seldom complain of headaches.

Very suggestive of chronic paranasal sinus disease is a condition characterized by listlessness, poor appetite, under-weight, poor color, so commonly caused by diseased tonsils and adenoids, which persist after their removal, all other conditions negative, should cause us to think of chronic sinus infections.

All cases in children where we have asthma, chronic bronchitis, arthritis, cardiac lesion, nephritis, and deafness, the sinuses certainly call for a thorough investigation, it is sometimes very hard to say that there is no sinus trouble, it may take weeks to come to a proper diagnosis.

During the past year we have noted the predominating symptoms that brought the patients to us, which has proven sinus disease.

Take cold easily (nasal discharge)	22
Otitis media	4
Deafness	3
Mouth breathers	19

1. Hypertrophic tonsils and adenoids 12
2. Deviated septum 4
3. Nasal polypus 3

Asthma 1
Sneezing 4
Odor from nares 3
Headaches 1
Chronic cough 9
Tonsilitis 8
Defective vision 1
Cervical adenitis 3

These are both private and clinics.

DIAGNOSIS

Transillumination of sinuses in children is very unsatisfactory, due to unerupted teeth in maxillary floor.

Inspection of nasal mucosa with the presence of pus, turbinates much thicker and rounded.

Post nasal discharge if present is a positive sign, if absent should be reexamined. The x-ray examination is the most important, only by such examination can we tell whether the frontal, sphenoid, or maxillary are present. The variations of sinuses in infants and young children are so great that without x-ray plates we can have no proper understanding of our cases.

Puncture of maxillary sinus for diagnostic purpose if necessary.

The treatment of acute cases, Skillem's advice, is "course of calomel, normal saline nasal douche, followed by 1-20000 adrenalin solution. Rest in bed in well ventilated room." Nasal douche in infant and young children, place on table or bed on abdomen, with head extending over edge, face downward and below level of table, fountain syringe holding warm normal saline not more than eighteen inches above the head, nozzle smooth glass tube which fits nostril, first one side and then the other, until discharge is completely removed. All patients under five years of age should be hospitalized.

A case of three weeks standing is considered a chronic condition. Diseased tonsils and adenoids are removed first, according to Dean eighty percent of his cases were cured, of the remaining twenty percent, ninety-eight percent are promised a cure by treatment.

Vaccine therapy is recommended by Skillem and is probably more successful in this class of sinus disease than any other.

I believe nasal suction to be the best line of treatment, a number of different methods can be used, the syphon treatment with fountain syringe or a water suction machine is good for home use. Following suction treatment the use of fifteen percent argyrol or solargentum brushed over turbinates or dropped in each nostril. Dichloramine T two percent is recommended by some.

Rarely are extensive operations indicated, unless there is imperative need of immediate removal of the infection or if after months of treatment combined with the minor operative procedure for ventilation and drainage, a marked chronic empyema persists which is causing serious complications.

The diet should consist of butter or cream, milk, eggs, succulent vegetables, fruits, orange juice, and a limited amount of bread, potatoes and cereals. Dr. Amy Daniels, University of Iowa, "We have observed that animals fed diets quite lacking or very low in the so called fat soluble vitamine, (Vitamine A) are subject to paranasal sinus infection, and infection of the middle ear."

Cod Liver Oil (Meads), plenty of sunshine, hygienic, proper clothing, proper sleeping room, some cases demand a change in climate.

There is not a man here, who has not at this time a number of sinusitis cases in his care, and it certainly is up to us to do something which will save these children from serious nasal operations later in life, much suffering, arthritis, cardiac condition, deafness, etc.

BIBLIOGRAPHY

Paranasal Sinusitis in Children, Dr. T. W. Dean.
Diseases of Sinuses, Dr. Skillem.

Some Salient Facts in the Diagnosis of Early Phthisis.

L. LAFE BRESETTE, M.D., Kansas City, Kan.

(Read before the Northeast Kansas Society, at Topeka, November, 1925.)

Tuberculosis is the most widespread, as well as the most deeply rooted of human infections. Throughout the civilized world it has always held first or second place as a cause of death. In the United States it has been estimated through the use of tuberculin tests that ninety per cent of all adults have been infected with tuberculosis. In the registration area of the United States there is near onto a million individuals sick with this disease, and public health reports showed 88,000 deaths from tuberculosis in 1921. In the last twelve years the death rate from this disease has declined over fifty per cent, due to intensive studies

which have enabled a diagnosis to be made while the pronosis is yet good.

There is still much room for improvement for, unfortunately, too many of us hesitate to diagnose phthisis until the chest is full of rales, the patient is spitting blood and bacilli, and it is time to take the measurements for a shroud. How easy it is to tell a patient he has another attack of "flu," he is "run down," or is neurasthenic, when to uncover the chest, give a good physical examination, and correlate the findings with a careful history, would diagnose an early tuberculosis. Many of us hold back a diagnosis of this disease in its inception because we know the family considers it a stigma because of the old idea that the disease is hereditary.

The object of this paper is to bring forth some ideas, gleaned from the literature and personal experience and to correlate and review some salient facts, the knowledge of which are necessary for an early diagnosis of phthisis.

The clinical picture of pulmonary tuberculosis is not easy to draw in definite terms because of the many ramifications in the pathology and symptomatology. We will go into these later, but suffice it now to say that no two cases are exactly alike in the development of physical findings.

According to Miller, of Columbia, there are three fundamental concepts that must be understood.

First, it is necessary to remember that pulmonary tuberculosis is essentially a relapsing disease after it begins to show itself, and it is improbable that any case would go from primary infection to death without periods of remittance. The history will usually show exacerbations alternating with quiescence until the disease is far advanced.

Second, it should be known the clinical picture of this disease is divided into general symptoms and focal signs, which are to be brought out by a careful history and physical examination.

Third, it must also be rememberel as a basic principle that tubercular infection does not of necessity mean tuberculous disease. This is very important for we now know that tuberculous infection is practically universal at age fifteen according to the best statistics, gathered from tuberculin tests and the necropsy table.

In order to explain and emphasize these three fundamentals, it is necessary to study the modes of infection, the pathology of this disease, and the physiology of the vegetative nervous system. There is no clean cut pathological entity tuberculosis, any more than there is a definite clinical picture tuberculosis. Pathologically it may be a microscopic group of bacilli surrounded by cells; it may be a tubercle found in a gland at autopsy; it may be an engorged viscus studded with fine miliary bodies, or a caseous, degenerated mass of pulmonary tissue. Tuberculosis shows all forms of tissue change in its development. It may show any of the following changes: proliferation, inflammation, exudation, caseation, necrosis, fibrosis or calcification; and the picture is so varied that its pathology can only be explained by following the results of animal inoculation.

From experiments on animals with direct controls, Krause, of Baltimore, lists the following definite facts: The immediate and characteristic reaction of tissue to primary tuberculous infection is always a proliferation of cells of the fixed tissue type. They probably form from the reticulum and are usually called epithelioid cells. These cells surround the bacilli and not until after a week is passed will leucocytes be observed. The end result in primary infection is always a tubercle. On the other hand, it we inoculate an animal previously infected, the immediate result is entirely different. The first reaction is a rapidly developing inflammation. This is explained by Von Pirquet as allergy. This reinoculation sets up an area of inflammation at the site of the second injection within a few hours. There is always a systemic reaction with fever and listlessness and a lighting up of any existing foci in the animal. No matter how large the first infection, Krause found the first results to always be tubercle formation, while the first result of reinfection is always allergetic in its manifestation. Applying the results of these experiments which have been worked out in many laboratories, is a great help in explaining the varied and peculiar pathological findings in tuberculosis in man. It explains how one active area of tuberculosis in the body on breaking down will reinfect another area and set up a new chain of symptoms by allergy. It also shows that acute tuberculosis is always the result of reinfection because acute tuberculosis is always inflammatory as it manifests itself.

The path of infection in tuberculosis has been a much discussed subject in the past, but through animal experimentation several definite conclusions have been reached. The tubercle bacillus may form a depot of

infection immediately adjacent to the place of entry. The bacillus may be transmitted by the lymph stream to other parts of the body and form depots of infection in adjacent or distant lymph glands through which it passes. Here it is well to remember that the flow of lymph is always toward the heart. It is also of importance to recall that the final destiny of the lymph stream is always the venous system and the pulmonary circulation. Here it is enlightening to see that all the venous blood is sent through the capillaries of the lung, and that any tubercular infection has full opportunity to lodge in lymph spaces of the pulmonary tissues. We can now see the peculiar relation of the lung to tuberculous infection. The lungs are in immediate relation to the outside world through the air inspired twenty times each minute. They are the converging points of the blood and lymph from all parts of the body. The lungs are drained by lymphatics which converge at the tracheo-bronchial lymph-nodes. These glands are so close to the tissues which they drain that in breaking down they are liable to infect the very organs which they are supposed to protect. These facts to some extent explain the incidence of pulmonary infection because wherever the portal of entry may be, the converging point of the infection will be the lung.

Another point of great importance brought out by Krause is this fact: "Limitation of movement favors the localization of tubercular infection, yet it promotes arrest of the process, and freedom of movement mitigates against infection but facilitates development and spread of a lesion once established." This explains the frequency with which tubercular lesions are found in the upper lobe of the lung, and the frequency with which they are arrested in this place. It also explains the graver prognosis when other parts of the lung are involved. The apices of the lung do not expand equally with other portions on ordinary respiration. Because of this fact the flow of lymph is not so rapid and bacilli are more apt to lodge and start a foci of infection.

With these facts in mind, we will turn to the development of the history which is by far the most important single factor in early diagnosis. In order to obtain a history it is necessary to understand the many and varied symptoms arising in the initial stages of phthisis. Pottenger in his book on "Clinical Tuberculosis" has analyzed all these many symptoms and divided them into three groups: Those due to toxemia; those due to reflex causes; and those due to the tuberculous process itself.

This seems to be a very workable classification, but to understand the etiology it is necessary to review, to some extent, the physiology of the vegetative nervous system. This division of the nervous system is in control of all the involuntary functions of the body. It is divided, as you recall, into the sympathetic and parasympathetic or vagus systems. The cell bodies of the motor neurons of this system migrate out from the central nervous system in early embryonic life. Those of the parasympathetic system are found in the walls of the viscera which they innervate, for example the plexus of Auerbach in the intestine. The motor and secretory cells of the sympathetic system after migrating out are found in clumps in front of the spinal vertebra, which when joined together form the ganglionated cord of the sympathetic system. There are other clumps known as prevertebral ganglia, such as the stellate or coeliac ganglia. These ganglia are connected with the central system by gray and white rami communicantes. The cells of the parasympathetic system are connected to the central system by branches from the third and seventh, and the ninth and tenth cranial nerves, and the nervus eregens from the second and third sacral spinal nerves. The action of these two divisions is antagonistic. Together they regulate the action of all unstriped muscle, and thus are in control of the action of the blood vessels, sweat glands, the alimentary tract, the genito-urinary system and the sphincters of the intestinal tract and the urinary bladder. Stimulation of the sympathetic nerves will cause one or all of the following symptoms: Headache, dilated pupil, malaise, nervous irritability, insomia, lack of appetite, coated tongue, tachycardia, inhibition of gastric and intestinal secretion and motility, constipation, fever and sweating. On the other hand, stimulation of the parasympathetic nerves contracts the pupil, increases salivary secretion, slows the heart and increases gastric and intestinal secretion and motility. When both systems are functioning normally, there is a state of physiological tone which will vary from time to time to a slight degree. Any excessive stimulation of one or the other systems will bring about a hypertonic state of the side stimulated. In explaining the many symptoms which may result from the activation of these two antagonistic sys-

tems by a tubercular process, we must remember that the harmones of the various endocrine glands are constantly entering the picture, and causing one or the other system to predominate in its action. We must also remember that reinfection in tuberculosis causes allergy and allergy sets in action immune bodies which directly stimulate the vagus system.

We can now explain the variety of symptoms that may become manifest in tuberculosis. Those symptoms listed in the first group as due to toxemia are malaise, feeling of exhaustion, lack of endurance, loss of strength, nervous instability, increased pulse rate, night sweats, temperature, and blood changes. They are not caused by tubercular toxemia alone, but may also be manifest in other intoxications. They may disappear after the acute process has subsided and the body has adjusted itself to counteract the toxemia, but they may return on overexertion or autoinfection through old foci breaking down and infecting new tissue.

The second group of symptoms listed as the result of nerve reflex are hoarseness, tickling in throat, cough, digestive upset, loss of weight, circulatory disturbances, chest and shoulder pains, flushing of face. They are the result of peripheral stimulation of both the sympathetic and parasympathetic by irritable foci somewhere in the lung. These symptoms are peculiar in that they all point away from the lung. Hoarseness directs out attention to the throat, and irritable heart to the circulatory system, gastro-intestinal disturbances to the abdomen and shoulder pains to some rheumatic involvement. The symptoms in this group are not constant but may appear and disappear frequently. They may clear up for months and then return.

There are only a few symptoms listed in the third group, the etiology of which is the action of the tuberculous process itself. They are frequent and protracted colds, spitting of blood, pleurisy, sputum and temperature. These symptoms usually appear later than the toxemic, or reflex, manifestations. When present, they are almost pathognomonic of tuberculosis. Frequent and protracted colds are usually due to tuberculous bronchitis. Inquiry will show in many cases they are not ordinary colds but are accompanied by many of the symptoms of toxemia. These colds may clear up and return months later. Spitting of blood should be considered tuberculous unless proven otherwise. This refers to the spitting of a teaspoonful or more of red blood. It may be due to tuberculosis, and usually is, when no other sign or symptom can be found. Pleurisy is another symptom which should never be taken lightly. It is usually a metastasis from some tuberculous focus in the body which must be active or the metastasis would not occur. This is a fact which makes pleurisy serious. Sputum, when present, should be watched carefully. Rise in temperature is caused by direct tuberculous inflammation as well as toxemia. It is a great aid in diagnosis of early phthisis to obtain a careful temperature record for a few weeks. A subnormal temperature in the morning, with a slight rise in the afternoon above 98.6 persisting over a period of weeks is so important that tuberculosis must be eliminated first as a causative factor.

All of these foregoing symptoms must be inquired into in the taking of a proper history and of them only the last four mentioned point directly to lesions in the lung. Understanding the causes of all these symptoms, with a careful history, we can usually find one or two in each group which will convinceus of the likelihood of a tuberculous infection.

With the foregoing knowledge of pathology, the path of infection and the symptomatology in mind, we will spend the remainder of this paper on physical signs. There is no acknowledged superior procedure for a physical examination. Many authorities advocate different phases as more important, but the man who excels, in my opinion, is one who follows a definite procedure in all cases and correctly interprets his findings with the facts.

To make any kind of satisfactory examination the patient must be stripped to the waist and be sitting up, if possible. It is absolutely necessary to avoid an examination through clothing if you wish to pick up early conditions. The embarrassment caused some women by the exposure is far surpassed by the good that may come of a careful examination.

The physical signs found in phthisis are also classified into groups according to the etiology by authorities, and to me it is the most satisfactory method to approach a physical examination.

The first group of physical signs are those of reflex origin. They are dilatation of pupil, interference with vocal cord, lagging of chest wall and rigidity of muscles. The second group are those caused by the tuberculous process itself. Increased resis-

tance of tissue to finger, alteration in percussion note, alteration in inspiratory and expiratory rhythm, alteration in quality and pitch of breath sounds and adventitious sounds, such as rales and friction sounds.

When we examine a chest for tuberculosis, the idea should not be to hear what kind of rales the patient has, or look for a dull area on percussion, but we should realize we are endeavoring to discover any evidence that will prove or disprove our supicion of early phthisis. Our attention must not be directed entirely to the lung. A dilated pupil, a flushed cheek, a spastic or atrophied muscle, the lagging of one side on respiration, or a misplaced apex beat, are all of importance. We must also remember that there is a definite connection between the vegetative nervous system and the somatic segments of the spinal cord, and look for reflex tenderness in skin and spasticity in muscle. Palpation will assist us here.

In auscultation of the chest the whole lung should be examined, but more especial attention should be given to the apex of the lung above and below the clavicle anteriorly, the axilla, the apex posteriorly and the area between the scapula and the spine. Auscultation will be the most valuable aid in examining the chest. Rough or harsh breathing is picked up early, if watched for, and is frequently found present with e a r l y bronchial o r broncho-vesicular breathing, where the expiratory note is prolonged. It is well to remember that there is normally a slight increase in the harshness and the length of the expiratory note over the right apex. It is not necessary to find rales to make a diagnosis but is much more satisfactory to do so. If rales are heard without the use of the cough, it is probable that the disease has extended beyond an early stage. The use of the cough, followed by a deep inspiration, will many times bring out rales where they cannot otherwise be found. The physician who attempts to examine chest and make a diagnosis on auscultatory findings alone, or any other single method or examination, will only diagnose well developed cases.

The x-ray by a competent man, with good equipment, is a great aid in early diagnosis, especially to corroborate with your examination and to present something definite to your family that will convince them of the condition present, and insure proper and careful treatment.

The laboratory is alweys a great aid but should never be relied on if findings are negative, for bacilli are only occasionally present in sputum. The presence of many lymphocytes in the sputum is suspicious. Tuberculin tests are of value in children under five. A negative test at this age will rule out a diagnosis and a positive one is almost diagnostic when the symptoms are present. A violent reaction should be considered suspicious of active disease in the adult.

To summarize we will say that the early diagnosis of pulmonary tuberculosis depends to a large extent on:

1. A working knowledge of pathology and the modes of infection.
2. The fact that tuberculosis in its early stages is a relapsing disease.
3. The fact that tuberculous infection does not of necessity mean tuberculous disease.
4. A knowledge of the symptomatology of tuberculosis in its relation to allergy and the manifestation of the vegetative nervous system.
5. An accurate temperature record over a period of weeks.
6. A careful history.
7. Physical examination of the uncovered chest.
8. Laboratory examination.
9. A careful x-ray examination.
10. The appraisal of the general condition of the patient and interpretive judgment in the correlation of all facts.

BIBLIOGRAPHY

Pottenger: Clinical Tuberculosis, Vol. I. Symptoms of Visceral Disease, Second Edition.
McKenzie: Symptoms.
Krause, Allen K.: Nelson's Looseleaf, Vol I. Baltimore Number, North American Clinics, 1918.
Miller, Jas. A.; Nelson's System, Vol I.
Eppinger and Hess: The Vagotonic Nervous System.
Patterson: Tice System, Vol. II.
Head: Concealed Tuberculosis.

A Study of Gaits

G. WILSE ROBINSON, M.D., Kansas City, Mo.

(Read before the Central Kansas Medical Society at Russell, Nov. 5, 1925.)

In making a neurological examination, the examiner must make many tests before he can arrive safely at a conclusion. These tests consist mainly of a comparison between the normal, as known, and the abnormal. By measured stimuli we can quite accurately, measure abnormalities in the sensory mechanism; we can also measure the power, tone and electrical reaction of muscles and check this against the known normal. A test of the reflexes yields much

information. An examination of the equilibratory sense is of much importance. A careful testing of the pupils and fundi of the eyes may help clear up the diagnosis. The character and nature of speech should be carefully considered, but in no case should a neurological diagnosis be made until the gait, if possible, has been intelligently and thoroughly studied.

In the first place the examiner should be sure that he has an intimate acquaintance with the gait of a normal individual. In the normal gait the body should be erect, the head straight, the arms should hang gracefully at the side while the legs should move regularly and evenly. The feet should be slightly everted, the steps should be even, of moderate length. The shoes should wear out at the heel showing that the heel touches the ground first. The gait of any individual is his manner of walking together with his carriage so it is necessary to study both the walk and bearing and be able to decide whether the walk and carriage are normal or abnormal. If abnormal, in what respect—also the distribution of the abnormality. One patient may be lame —in that he drags one foot and holds stiff one arm—another may be steady in both legs and lurch with his entire body.

A gait may be abnormal in respect to the body, the arms, the legs, the feet, the step, and in each instance the attitude, position and control may be affected.

In testing the gait of a patient we should first observe his entrance into the room. He will walk more naturally if unconscious of being examined. After he comes under the direction of the examiner he should be told to walk forward and then backward, with eyes opened and then with the eyes closed. His ability to stand with feet close together eyes opened and closed should be tested. The most important of all gait tests is known as the "line test" or, "heel to toe test.' Have the patient follow a line across the room, and on each step touching with the heel of the advancing foot the toe of the opposite foot. The gait must be normal for an individual to heel and toe a line successfully and follow the same line across the room. The wear of the shoes should also be carefully noted in order to ascertain if there be any departure from the normal. The drag foot wears the shoes more on the toes. In some gaits the shoes are worn evenly, especially is this true of the shuffling gait.

There are a number of other tests that may be used.

Have patient attempt to stand first on his heels and then his toes. If able to do this have him attempt to walk on toes and then on heels. Have him walk in a circle in both directions, and if possible test his ability to walk up and down stairs.

Fournier has suggested three tests for the differentiation of some types of ataxia: First—have patient arise abruptly from sitting position and at once try to walk. Second—have him stop abruptly while in the act of walking. Third—have him turn abruptly while walking.

Man has the ability to walk successfully in an erect position because of the proper coordination of a very complex neuro-muscular mechanism. The cerebral cortex furnishes the energy which stimulates the contraction of individual muscles and groups of muscles. This energy is furnished in the rough—unguided. Each individual muscle has representation in an area of cells in the cerebral cortex, and the energy destined for this muscle has its origin in these cells, but in order that there may be precise coordination of muscular contraction the energy from the cerebral cortex must be synergized in the cerebellar cortex. In the human cerebellum there is a cortical representation for each individual movement, whether simple or complex. The cerebellum is not concerned with the contraction of any one muscle but rather with groups of muscles, which in turn are concerned in certain definite movements. The character of gait is also very greatly influenced by the static labyrinth, the function of which is to aid in the maintenance of station, and the kinetic labyrinth the function of which is to recognize and analyze the motions of the body and its constituent parts. These two structures together can correctly be designated as the central organs of equilibrium. The static function is limited to the utricle and saccule, whereas the kinetic function is said by Randall to be presided over by the three semi circular canals, and also probably by the utricle and saccule. The static organs give information as to the position of the body, while the kinetic functions of the three semi-circular canals is to take cognizance of rotary movements of the body in all conceivable planes. The kinetic function of the semi-circular canals must not be confused with the term kinetic system which Crile has used for the brain, thyroid, adrenals and muscles. There are then three principal so-called centers for our consideration in a study of gaits.

First—the energy initiating center of the cerebral cortex.

Second—the energy synergizing center of the cerebellar cortex.

Third—the equilibratory center of the internal ear.

In order that the gait of the individual be normal it is absolutely necessary that these three most important, so designated centers, be performing their several functions in a perfectly normal manner. It is also essential that they be normally associated one with another by associating nerve tracts as well as normally associated with other less important motor and sensory centers. These associating nerve tracts as well as other sensory and motor centers of the brain must also be functioning in normal manner. In addition these various centers must be brought into normal communication thru the medium of both centrifugal and centripetal nerve fibres with the skin, muscles and bony systems of the body. In addition to the above the muscles, bones and skin must be performing those functions concerned in the maintenance of station and gait in a normal manner.

If consideration is given to the foregoing statements no emphasis is necessary as to the complexity of the neuro-muscular mechanism concerned in the production of a normal gait. I do not believe too strong emphasis can be given to the necessity of a careful analysis of the gait of neurological patients, or the difficulties which may be encountered in the study of a defective gait as to the cause and nature of the defect.

I shall briefly analyze some of the more important of the abnormal gaits.

First the ATAXIC GAIT—This gait is characterized by an attitude of of uncertainty with poor control and a characteristic position of the body. The patient is apparently uncertain of his legs. He does not control them well and they are held far apart increasing his base. His feet come down with a distinct stamp, his steps are uncertain, of irregular length, he follows his steps with his eyes and the legs appear to be running away with the body, the shoes show little wear as is usually the case with the ataxic patient. The body sways and the patient leans well forward. The ataxic gait is characterized by uncertainty, irregularity and the stamping step.

The ataxic gait occurs in the following diseases:

First—Locomotor ataxia.

Second—Combined posterolateral lesion.

Third—Some forms of spinal syphilis.

Fourth—The ataxic type of multiple neuritis.

Fifth—Internal ear diseases.

Sixth—Tumors of the frontal region of the brain.

Seventh—Ataxaic paraplegia.

Eighth—General paralysis.

Ninth—Friedreich's ataxia.

The HEMIPLEGIA GAIT occurs in patients with paralysis on one side of the body. The affected leg is rigid and spastic. It swings with and not independently of the body. The swing is in the nature of a semicircle, the leg rotating outward and then inward toward the trunk forming an inverted letter "C". The arm is carried in a semiflexed position and also rigid. The patient walks in an uneven or one-sided manner. He can be heard before he is seen. The noise of his walk is regular rythmic and grating.

The hemiplegic gaits occur:

First—in hemorrhage or arterial occlusion in the motor area.

Second—in some cases of cortical edema.

Third—in tumors of the motor area.

Fourth—Paresis.

Fifth—Paralysis agitans.

The STEPPAGE GAIT is also called the equine and dropfoot gait. It occurs in any condition in which there is paralysis or abnormal weakness of the anterior tibial groups of muscles. The foot drops, the toes drag. In the steppage gait the body is not affected, the toes usually scrape the floor even when the legs are raised to an abnormal height and the feet come down with a rythmic flap like noise. This condition may be unilateral or bilateral. The wear of the shoes is on the toes, the knee action is high.

The principal diseases in which the steppage gait occurs are:

First—Multiple neuritis.

Second—Lesions of the nerves supplying the anterior tibial group of muscles.

Third—Poliomyelitis.

Fourth—Progressive muscular atrophy.

The SPASTIC GAIT is often confused with the ataxic. The legs and attitude of the patient are usually both involved. The attitude of the whole body is one of stiffness and a tendency to lean forward. The legs are adducted, the feet inverted—steps are regular but short, and the feet are barely lifted from the floor. The stiffness and disability is so great in advanced cases that the patient barely creeps and advances with great difficulty. The characteristic

features of this gait are—stiffness, slowness, creeping and shuffling.

The following diseases are characterized by the spastic gait:

First—Primary lateral sclerosis.
Second—Disseminated sclerosis.
Third—Combined sclerosis.
Fourth—Amyotrophic sclerosis.
Fifth—Hereditary spastic paraplegia.
Sixth—Spastic paraplegia.
Seventh—Syringomyelia.
Eighth—General paresis.
Ninth—Compression myelitis.
Tenth—Spinal meningitis.

The CLUMSY GAIT has been described by Oppenheim as the waddle—the legs are propelled by the muscles of the trunk rather than by the muscles of the legs. The gait is a rolling one, patient rolls from side to side in sailor-like fashion, the muscles of the legs are weak but usually well preserved.

The diseases in which this gait is found are: The muscular dystrophies, and in some cases of myxedema.

The CEREBELLAR GAIT is represented by a form of ataxia, called cerebellar ataxia, which is altogether different from the ataxia as seen in tabes or the ataxic form of multiple neuritis. The characteristics of the cerebellar gait are: great unsteadiness, irregularity with a tendency to reel to one side. There is no ataxia while the patient is at rest either sitting or lying, but is manifested immediately the patient assumes an erect attitude or attempts to use his legs. Wyllie says—"In the tabetic type of ataxia the legs give the appearance of running away with the body; in the cerebellar type of ataxia the legs give the appearance of being run away with by the body."

In cerebellar ataxia there is a tendency to a greater involvement of the body than in tabes. In the cerebellar attitude the head is high and retracted; cervical muscles are rigid, one shoulder a little higher than the other. In many cases in the standing position there occurs a distinct lordosis.

The characteristic features of the cerebellar gait are—irregularity of the step, the lateral reeling and the typical cerebellar attitude.

The cerebellar gait occurs in:

First—Diseases in the cerebellum.
Second—Diptheria.
Third—Disseminated sclerosis.
Fourth—Friedreich's ataxia.
Five—Diseases of the frontal and quadrate lobes.
Sixth—Diseases of the cerebral cortex.
Seventh—Bulbar softening.
Eighth—Diseases of the crus cerebelli.
Ninth—Myelitis, early stages.

The FESTINATING GAIT is the gait of paralysis agitans. The face is mask-like and void of expression, the body is rigid, the arms are flexed on the elbows, the hands partly closed usually held in the position for writing, the attitude of the body is customarily forward, but the patient may lean backward or sideways. There is in the early stages tremor of the fingers, later of the arms, hands, legs and in the advanced cases of the entire body. The patient starts to walk slowly but as he advances the gait becomes more rapid, steps are short and shuffling.

The characteristic features of this gait are—rigidity, shuffling and hurrying.

The STAGGERING GAIT is also called the Alcoholic Gait—it is supposed to be not so common now as it was prior to Mr. Volstead's Act. The patient totters and reels, leans forward and backward, and from side to side. The attitude changes rapidly as the patient lurches indiscriminately. The steps are irregular, uneven and uncertain. Patient has poor control over both body and legs. The gait is pre-eminently ataxic, but it differs from the cerebellar gait in that the patient may reel in any and all directions. It differs from the spinal type of ataxia in that the patient does not follow his feet with his eyes, nor does he stamp with his feet. There is not the stiffness, the scrape, the shuffling movements as seen in the spastic gait—it lacks the sailor-like roll of the clumsy gait.

The characteristics of the staggering gait are the wide diversity of excursions, the marked reeling and the great degree of general ataxia which is evident in every position and motion.

The disease in which the staggering gait may occur are:

First—Acute alcoholism.
Second—Multiple sclerosis.
Third—Cerebellar disease.
Fourth—Brain tumors.
Fifth—Multiple neuritis.
Sixth—General paresis.

The HYSTERIC GAITS are often puzzling and confusing to the examining physician. The hysteric patient may have gross tremors of the entire body which affect, to a considerable degree, the gait. There may be a monoplegia, hemiplegia or paraplegia. On first appearance these various forms of paralysis may appear to be organic. In hysteric monoplegia, involving the leg, the foot

is affected to a greater degree than the leg. In hysteric hemiplegia usually the arm and leg alone are affected, the muscles of the trunk and face escaping. In hysteric paraplegia there are usually contractures without sensory disturbance or loss of sphincter function. The reflexes in hysteric paralysis are not abnormal as to quality but may be modified as to quantity. In hysteric mono plegia involving the leg the foot is dragged and not lifted from the ground; in the hemiplegic the leg and foot also are dragged, the sole not leaving the ground.

The hysteric hemiplegic gait differs from the organic type in that there is not the characteristic deformity or typical side-wheel motion; and in hysteric hemiplegia the leg is more completely paralyzed than in the organic type. The characteristics of the hysteric gaits are:

Complete palsy.

Drag Foot.

Ability to use the limb in emergency.

ASTASIA-ABASIA is a form of hysteria. In this condition the patient has perfect control of al lthe movements of the leg excepting those necessary in walking.

The gait of ARTERIOSCLEROSIS usually occurs in the aged, it is likewise called the senile gait. The attitude is one of old age, there is slowness and rigidity of movement, the legs being weak and the steps irregular and shuffling. The paretic may manifest many types of gait. His gait may be ataxic, steppage, spastic or hemiplegic. Even in the early stages there is an incomplete adjustment of the muscular movements, the legs are weak, some bending of the knees and difficulty of progress, the entire muscular system lacks tone, this is especially manifest in the facial muscles with a decreasing lack of expression.

In HEREDITARY CHOREA the legs, feet and body move from side to side and place to place. The arms are thrown around indiscriminately in a flail-like motion, the feet scrape on the ground, the movement has been described as clam-like in character.

MIXED GAITS occur in many conditions. In some patients there occur a spastic ataxic gait, in others a clumsy, steppage gait or there may be a hemiplegic gait on one side and a steppage gait on the other.

———R———

Golf Ethics

BY RENIG ADE.

This is the time of the year when a great many of the medical profession are diligently attempting to work up their golf form; and are thereby required to spend considerable time on the links.

Until the present, the alienist has been groping blindly for a proper classification for this obsession, but has made no headway.

Just the psychological or physiological change that takes place in a heavy set individual between eight A. M., when his back hurts him so he can't go down cellar after a tub for his wife; and three P. M., when he valorously goes charging around five miles of pasture and foot hills, head up, chest protruding, cursing, slicing and perspiring, has not been determined.

It probably is a reversion to the primitive that anthropologists will work out in time.

At present we have only one example in the lower animals that at all resembles this. It is the small black beetle, or tumble bug, that is fairly familiar in Central and Western Kansas, Oklahoma and Texas.

This bug cleverly constructs a ball of excrementitious material; then with its front feet on the ground, takes its stance, with the hind feet on the little ball, and with a follow through movement, rolls the ball steadily along a road or cow path, never once taking its eye off the object it is rolling.

As evolution came, the "bug" gradually stood erect, became possessed of some crooked sticks, attempted to hit the ball instead of kick it, and used a ball of rubber instead of the material that served his forebugs. The word "fore" which a player often hears after being hit in the mid-section by an enthusiastic friend, is corroborative of this genesis.

A great many books have been written on golf, and the instructions if followed carefully, day and night, will produce a fair player in any where from ten to thirty five years.

However, it is difficult for a great many to follow these instructions. For instance, the corpulent individual who has not seen his feet since the hard winter '93, stands a fat chance of hitting a little ball lying somewhere in front of him. He must depend entirely on his caddy as to its whereabouts. If that individual is dishonest and puts the ball in his pocket, the fat man might strike all day and never get away from the first tee.

If a man has St. Vitus Dance, this would detract from his game. A sudden attack might come on just as he would be at the top of his swing. His club would refuse to

come down. It would be dangerous and discourteous to walk on and leave him, and it might delay the game to wait.

Or to ask a badly bowlegged man to bend the knees toward each other and pivot on his metatarsal, would of course be useless instruction; for the reason that we have never known a bowlegged man who knew what a pivot was. The only one we ever questioned thought it was something to drive in the bung hole of a beer keg.

These examples are given to show the absolute uselessness of the books written on golf. The man who can understand and apply the instructions given, is already a finished golf player, and all he needs is a pipe and a quart of Canadian Club.

There is a demand for a short code of instructions and ethics for the man who only plays afternoons and Sundays, and to these, the following are submitted, trusting the careful study of the same will improve the readers game.

In order to make it more elementary, I shall use the Meisterchaft system, or what is known as the familiar conversation plan.

Tinkle, tinkle, tinkle. "Hello, is this Main 17018?"

"No this is Fairpart 826."

"Central, I want Main 17018 quickly, please. This is Dr. Glandular speaking."

"Hello. Dr. Endocrine's office?"

"Yes."

"Is Doctor in?"

"Yes, but he is very busy. Yes, he's dated for all afternoon."

"Tell him this is Dr. Glandular asking him to play a game of golf in about fifteen minutes."

"Oh, yes." A ten second pause. "Yes, he says he will be right out but can go only two rounds."

A foursome is completed by the addition of a groceryman, who is about to take the bankruptcy degree; and a prohibition enforcement officer who plays a rotten game but is a splendid locker entertained.

We now have our game started, and the ethics will be unfolded as the game progresses.

When a player has teed up his ball and draws back to strike, it is not good form to reach for his ball or even ask to see it; even if you are suspicious that it has your initials plainly marked on it. It may cause him to slice it hurriedly over into the middle of an oat field, and you will never recover it. The gentlemanly golfer considers it much better form to extract a couple of new balls cleverly from the player's bag when the owner's back is turned. This is known as "hooking the ball."

After the player has sliced his ball as usual, the following player should not tee up until the former has finished cursing and recovered the club he has thrown in the general direction of the slice.

Any vitriolic words that may be suggested to the original player, that he has failed to use will be gratefully accepted, and should be courteously volunteered.

Should a player try to describe in detail each of the shots he has made, do not strike him with a wooden club, as they break fairly easily. A heavy driving cleek with a follow through is indicated, keeping the eye on the base of the ear. He may be stamped on after the game if still alive.

In case you have only one club with you and wish to borrow a brassie, it is permissible to ask for the new $24.80 club a friend has won in a tournament. He will enjoy watching you knock the rocks out of the rough with it. He will also enjoy seeing you run over by a heavy truck at Fifth and Main later in the evening.

The practice of putting five or six balls on a green after holing out, when a couple of professionals are waiting to come up, should not be encouraged except among the more robust, as the mortality in California last year was very high along this line.

It is contrary to golf ethics to choke or throttle a caddy because he refuses to give you a ball he has found marked with another players name. It is much more gentlemanly to take a quiet look around the lockers at the club house.

When an opponent who is nervous or visibly agitated, is attempting to putt, it is bad form to throw cigarette stubs, or spit tobacco juice at his ball. The same result may be obtained and in a more kindly way by playfully prodding him in the ribs with a niblick with a fairly heavy loft, or a jigger. This not only disturbs his aim, but tickles him as well. However, I have stopped several bloody brawls that began as the result of this boyish prank, and—have started an equal number.

In case the fairway ahead becomes congested with lady players of large volume who move slowly, common chivalry will not permit the throwing of divits or sticks at them. Still the new rules allow you to walk boldly up and break one leg of the near-sighted tenor singer who brought them out.

These are but a few of the fundamental rules. I have purposely avoided such technical terms as stance, bunker, Sandy Mc-

Phersan and Hellandamnation.

The sticks used, matter little. The average golf player can make about the same score with a boat oar and a potato masher as he can with a gunny sack full of niblicks and stances.

In this brief article it has been possible to touch but a few of the more important points. However, I trust I have emphasized the Chesterfieldian attitude that every golf player should strive to attain toward the game, and to maintain toward his fellow players.

———B———

History of the Kansas Medical Society

(Continued from page 375.)

The twenty-sixth annual meeting of the society was held in Fort Scott, beginning at eight o'clock on May 4, 1892. Dr. J. E. Oldham of Wichita presided. The minutes of this meeting fail to record the number present or the number of new members admitted.

Several matters concerning the Stormont Library were discussed, the most important of which are mentioned in the follow extract from the minutes:

Dr. Reid Alexander submitted the following report of the Stormont library committee.

"Mr. President.—We have the honor to report to this society the following list of books, charts, diagrams and manikins which constitute the purchases and donations to this library since its organization.

"A reference to its pages will show that it consists of 896 bound volumes, aside from several valuable aids to study in the form of diagrams and charts, prominent among which we are pleased to call your attention to Marshall's anatomical diagrams, life size and mounted on rollers, and Bently and Trimens medicinal plants.

"The amount expended so far in these purchases is $2,639.05, which has been drawn from the fund of $5000.00 which Mrs. Stormont has donated as a nucleus to the library. As will be seen, there remains of this fund $2,360.95 unexpended, which will be used as Mrs. Stormont directs.

The state treasurer informs us that he has placed $703.34 to the credit of the Stormont Medical library, it being the accumulated proceeds arising from the investment of the $5000.00 permanent endowment fund. These profits will not be drawn upon until the amount of her present donation is exhausted.

Through the kindness of Mr. H. J. Dennis, state librarian, ample room has been given us in the halls of the state library for these purchases, and as additions are made space will be provided. Mr. Dennis has listed these books, both as to title and subject upon which they treat, and has devised many ingenuous aids to assist the student in his search for topics.

As these books are works of the highest authority, latest editions, and cover the whole range of medical literature, we take pleasure in presenting you this list.

"Respectfully submitted,

"REID ALEXANDER,

"Chairman, Library Committee.

"Dr. C. A. McGuire presented a communication from Mrs. Stormont, as follows:

"Topeka, Kansas, May 2, 1892.

" 'To the Honorable President and Members of the Kansas Medical Society:

" 'Believing, as I do, that the best interests of the society, the Stormont Medical Library and myself can be served by the election of a permanent chairman of the library committee, I would respectfully ask as a favor that the society so elect.

" 'Should this request meet with the approval of your honorable body, I would again ask as a favor that Dr. Reid Alexander be elected to fill the position. In making this special request for the election of Dr. Alexander as permanent chairman, I am governed by reason of the fact that his personal and business relations with the late Dr. Stormont in the past and myself in the present have been such that I feel that he has been of material aid and benefit to me in establishing the Stormont Medical Library, and his knowledge of and association in the work will best subserve the object desired in the completion of the same. I also find that my business relations with the committee are more readily and satisfactorily conducted with the chairman than with the committee as a body; and for the reasons above mentioned and my true wish to complete the work in the most satisfactory manner, I am sincerely your well-wisher,

" 'JANE C. STORMONT.'

"On motion Dr. Alexander was made permanent chairman of the Stormont library committee.

"On motion the library committee was requested to investigate some plan for making the Stormont library a circulating library, and present the same to the legislature.

"Dr. J. E. Minney submitted the following resolution for Dr. Schenck:

" 'Whereas, The American Medical Association, at its last annual meeting, inaugurated with great unanimity a movement to establish a national department of health with a secretary of public health in the cabinet, under whose care should be placed all matters pertaining to public health; and,

"Whereas, The duties of the treasury department, crowded with the finances of a great nation, are in nowise germane to public health; and,

"Whereas, No interest in a nation is more important to its people than life and health; therefore,

"Resolved, That we heartily indorse the recommendation of the national association looking to the establishment of a department under whose protecting aegis shall be gathered all that pertains to the health and development of the people, and whose officers, like those of the army and navy, shall, after careful examination, be appointed for life.

"Resolved, That we earnestly request the senators and representatives from Kansas to labor for the establishment of such a department, and that a copy of these resolutions be forwarded to each representative."

This was the second meeting in which the section program was in effect. On the second day of this meeting a motion was made by Dr. Fryer of Kansas City, Missouri, that a committee be appointed to select from the program certain papers to be read in the general session. This motion carried and the committee that was then appointed selected ten papers that were read in the sections to which they had been assigned and were again read in the general session, seven of these papers were presented by physicians from Missouri. Some of the men who read papers in a section meeting requested permission to also present them in the general session.

The following officers were elected for the ensuing year: F. F. Dickman, Fort Scott, president; C. H. Shriner and W. S. Harvey, vice-presidents; G. C. Purdue, secretary; W. R. Priest, treasurer; D. F. Longenecker, member judicial council.

The twenty-seventh annual meeting was held in Topeka. It convened on the evening of May 10 and continued over two days and evenings. The records state that there were over two hundred physicians in attendance and that several new members were admitted.

Recommendations from the Judicial Council that certain amendments be made to the constitution and by-laws were read. However, the only amendment that was adopted provided that there should be a recording secretary, who shall serve for three years, and a corresponding secretary who shall serve for one year.

The following officers were elected for the ensuing year: G. W. Hogeboom, Topeka, president; E. B. Peters and Geo. M. Gray, vice-presidents; G. C. Purdue, recording secretary; W. R. Priest, corresponding secretary; L. Reynolds, treasurer; H. Z. Gill and L. H. Munn, members judicial council.

The twenty-eighth annual meeting was held in Atchison on May 3 and 4. There were fifty-seven members present and thirty-six new members were admitted.

A report of the committee on Stormont Library showed that there were at that time 1,987 bound volumes in the library and the amount of $5,000 contributed by Mrs. Stormont for the purchase of a library nucleus had been exhausted. It also showed that there was in the State Treasurer's hands $1,303.34 accrued interest on the endowment fund.

The President, in his address, referred to some unwise restrictions in the code of ethics on the matter of consultations with irregulars. This part of his address was referred to the Judicial Council for consideration and report. The Judicial Council reported that it approved the following part of the President's address:

"I do not desire to be understood as invoking the exercise of a narrow and censorious disposition. I believe that the Code of Ethics of the American Medical Association, which we have adopted, and which is binding upon us individually, should, in many important respects, be amended, and in some degree liberalized. We, here present, claim to represent the healing art traditionally from the days of Hippocrates and Galen to the present. There is no fragment of knowledge which might aid our skill which is not extant, and to be acquired by the profession as represented by us. This is our claim. We assert that we are the recipients of the knowledge and wisdom and experience of centuries of time for the amelioration of human suffering, and curing the body of its ills. If our claim be well founded—and I assume that no one here will be heard to deny it then we have nothing to fear from the contact of the socalled schools of medicine which reject or disregard the vast

body of this accumulated knowledge, and believe in the universal efficacy of a narrow principle. If the related sciences which comprise the medical art be founded upon truth and exact knowledge, and we have acquired them, we should be ever ready to vindicate them in practice. The true test of medical skill and science, and the only one which will sustain and justify its votaries, must be made at the bedside.

"The Code of Ethics, which is made a law unto us in Kansas, forbids that we should go into consultation with homeopathists or with the socalled eclectic practitioners. I am convinced that the thick and thin adherence to this rule has done more to promote popular sympathy for, and, as a result, popular faith in, these so-called schools, than all other things put together. They say that our objection to meeting them comes from fear; that we dare not illustrate our theory, or assert our diagnosis, or make or permit a comparison of results to be made. The layman is not to be blamed for accepting this explanation as reasonable and true. His argument may be shaped in this way: "If your medical knowledge is as you claim it, the last word of science, is universal, is based upon immemorial experience and sound and thoroughly tested knowledge, you should be willing, when called upon, to employ it for the relief and cure of your fellow man. If it be all you claim it to be, it is easy for you to confute one who attempts to practice in disregard of it. Either your prejudices are so narrow and your disposition so cruel that you will allow your fellow man to languish and die upon a point of etiquette, or you dare not meet your homeopathic adversary at the bedside and give evidence of your skill and knowledge."

"The best way to prevent the encroaching of so-called schools into the favor of the people, and to establish confidence and respect for professional orthodoxy, is to meet them, if the patient shall so desire, in practice, I believe the Code of Ethics should be so amended as to allow a question of this sort to be settled by the individual judgment of the practitioner."

On the adoption of a resolution to that effect the Committee on Stormont Library was made a standing committee.

The following officers were elected for the ensuing year: W. R. Priest, Concordia, president; Geo. M. Gray and D. C. Tyler, vice-presidents; G. A. Wall, corresponding secretary; L. Reynolds, treasurer; C. A. McGuire, member judicial council.

The twenty-ninth annual meeting was held in Topeka on May 16 and 17, 1895. Sixty-one members answered to roll call. During the session forty-six applications were received and approved.

On account of the death of Dr. Reid Alexander who had been the permanent chairman of the Stormont Library committee, Dr. C. A. McGuire was appointed by the president to fill the vacancy.

The report of the secretary showed that the funds of the Society had been inadequate to pay for publishing the proceedings in book form and money had been borrowed to meet the deficiency. The by-laws were therefore amended so that the admission fee should be $5.00 and the annual dues $2.00.

The following resolution was also adopted:

Resolved, That the Corresponding Secretary be and is hereby invested with exclusive power to incur and pay bills on behalf of the Society.

The following resolution which had been offered the year before was adopted:

Resolved, That Article V of the Constitution of this Society be amended by striking out the words "at such time and place from year to year as the Society may elect," and inserting the words "in the city of Topeka, Kansas."

The following officers were elected for the ensuing year: R. S. Black, Ottawa, president; M. N. Gardner and Andrew Sabine, vice-presidents; G. A. Wall, corresponding secretary; L. Reynolds, treasurer; W. H. Mathis, member judicial council.

(To be continued.)

———R———

Chemical Analysis of Sweat

Robert E. Barney, Ann Arbor, Mich. (Journal A. M. A., Oct. 31, 1925), was concerned chiefly with the non-protein nitrogen and urea. In addition, he determined the total solids. The composition of sweat as regards the amounts of non-protein nitrogen and urea nitrogen per hundred cubic centimeters varied within rather wide limits. The nonprotein nitrogen ranged from 28 mg. to 200 mg. and the urea nitrogen from 14 mg. to 63 mg. per hundred cubic centimeters. There was an apparent diminuation in the output of nitrogenous elements of the sweat in so-called senile eczema.

Paretic Gold Curve in Poliomyelitis.

KARL A. MENNINGER, M.D., Topeka.

The paretic type of colloidal gold reaction is apparently very rare in spinal fluid in cases of acute anterior poliomyelitis. No instances were found in the literature, and in fifty or more cases studied by Regan et al. (Am. J. Dis. Child 25:76, 1923) the nearest aproach to the paretic type of curve was 3-2½-2½-2½-1-0-0-0-0-0.

The patient here reported was a woman of 25 with typical poliomyelitis and no evidences of paresis or syphilis. The colloidal gold test was made by the public health laboratory of the Kansas State Board of Health, Topeka, August 19, 1925. The reading was as follows: 5-5-5-5-5-5-4-3-0-0. It is unfortunate that the spinal fluid was insufficient in quantity for a Wassermann. It is, of course, not impossible that the patient has paresis *sine paresi*, but there were no other indications of this and, as Cabot has shown, compound diagnoses are extremely fallible.

The authenticity of the gold solution was tested by the spinal fluid of an undoubted paretic and found to be of normal sensitivity.

A bried summary of the case to verify the diagnosis follows:

Family History: Migrainous father, with insane uncles, migrainous sister, frail and nervous brother, and one brother died of poliomyelitis fourteen years ago.

Past History: Healthy childhood. Married life has been uneventful except for the birth of one child four years ago. No miscarriages.

Present Illness: Eleven days previously woke up in the night with severe headache and backache. Next day her temperature was 102:F. (No diarrhea but had had it for two days a week previously.) Noticed she couldn't lift her legs although she could still stand, but by the next day she couldn't use them at all. This was three days after the onset of the illness. The backache, headache and fever had abated somewhat. She has been paralytic since. When she bent her head forward and swallowed she said, "it hurts clear down to my knees." No complaint of stiff neck, or visual or urinary disturbances.

On this day the patient's four-year-old daughter developed a diarrhea and fever; the next day she was listless and complained of legs hurting; also some headache and backache; by the third day she seemed well again.

For the next four or five days there were no changes in the patient and as she was away from home they put her on the train and brought her home two days previously. After this trip she had more severe headache, also dragging pains in the shoulder girdle and in the hips, knees and ankles. They have been more or less constant but are worse by spells and she was very restless and troubled the night prior to the lumbar puncture.

Physical examination showed a well developed young woman with good musculature except where flabby as a result of the paralysis. Thes chest was negative except the heart rate was rapid and P2 accentuated over A2. The abdomen was slightly sunken, and because of the flaccidity the viscera were easily palpable and apparently generally tender although not painful. Both legs were swollen and from the history chronically so, but did not pit easily to pressure. Temperature 98.6, pulse 86.

Neurological examination: Pupils were contracted; reacted promptly to light through about one-fourth normal distance. The vessels were full; discs reddish, not obscured. Difficulty in swallowing. Could not raise head from pillow. There was an almost complete flaccid paraplegia involving adductors, glutei and abdominal muscles; also weakness of right deltoid and of an indeterminant group of spinal erectors. All movements of legs caused pain, evidently of tendon-stretch and nerve-stretch origin. Sensory system everywhere unchanged. Knee-jerk and ankle-jerk were absent bilaterally. Abdominal reflex absent; plantar slightly hyperactive on left, absent on right; positive Brudzinski and Kernig.

Laboratory Findings: Blood serum Wassermann negative throughout. Spinal fluid under 150 mm. pressure (water manometer); cell count 15, globulin Pandy, 3 plus; Nonne-Appelt, 3 plus; Noguchi 3 plus; sugar 96.9 mgm. per 100 cc.; colloidal gold curve 5-5-5-5-5-5-4-3-0-0. The quantity was insufficient for a Wassermann test.

———R———

UNIVERSITY OF KANSAS CLINICS.

Clinic of Frank C. Neff, M.D.

Department of Pediatrics.

HODGKIN'S DISEASE IN A FIVE-YEAR-OLD BOY.

The Hodgkin syndrome is of especial interest to the pediatrician because of its rarity in childhood. In infancy the disease

is unknown, but after three years of age, it begins to appear occasionally.

The family is living and well. There is no familial tendency in Hodgkin's disease. This boy's birth was difficult and the instruments used caused a hematoma of the neck, which soon disappeared.

This boy began to have enlarged glands on one side of the neck in December, 1924, ten months ago. Three light doses of Roentgen ray were administered at St. Joseph Hospital in January by Dr. McDermott with prompt but transient results. He came into the outpatient department of Bell Hospital in September of this year with enlarged glands plainly visible and since then steadily enlarging.

The features of the case are:

Limitation of the obvious adenopathies to a four-inch area on one side of the neck and downward to the clavicle. The glands are discrete and movable and not adherent to the skin, but give the impression on inspection of a large mass. The consistency is elastic. No pain or inflammation has ever occurred.

The radiogram of the thorax made last January will be contrasted with those recently made by Dr. McDermott. All of the films show a large shadow in the mediastinum indicative of a group of mediastinal or peri-bronchial grands. There have been no symptoms of pressure from these glands. Dyspnea, dysphagia and fatigue have not yet occurred. There is marked dullness over the right chest posteriorly.

The appetite is good. There is no cachexia. The weight has recently increased, he now weighing 38 pounds. The spleen, liver and mesenteric glands cannot be felt.

The blood shows a simple secondary anemia except for a slight increase (11%) in the large mononuclears and transitional white cells. The small lymphocytes are decreased. The red cells average 4,000,000. The average hemoglobin 75%. The present leucocyte count is 12,500, with small lymphocytes 25%, polymorphonuclears 60%, and platelets increased.

The examination of the glands by Dr. H. R. Wahl shows:

Gross Pathology. Specimen consists of two lymph glands which have been sectioned. When approximated these glands measure 20 by 18 by 15 mm. and 10 by 10 by 7 mm. They are smooth, somewhat pale in color and have here and there over their surfaces a few adhesive tags. On section a homogeneous cellular architecture is seen which is grayish-white in color and is friable. In the larger gland a small softened area is seen but no areas of caseation were grossly evident.

Histological Pathology. The lymphoid architecture is largely broken down and can scarcely be recognized in many places. There is a very marked diffuse endothelial cell hyperplasia. The swelling of the endothelial cells of the reticulum as well as the lymphoid sinuses can be seen. There are large numbers of large giant cells and cells with multilobulated nuclei characteristic of the so-called Dorothy Reed giant cells. There is abundant infiltration of eosinophilic cells. There is very little fibrosis present. The picture is that of an early stage of Hodgkin's disease.

General Consideration. At this stage thereis a relative lymphocytosis. Later as the disease becomes widespread, one may expect a marked increase in polymorphonuclears, eosinophiles, transitionals and platelets.

According to Holt the disease is a clinical and pathological entity and not dependent upon infections. Mallory, however, thinks the term Hodgkin's is inaccurate, that a few of the cases will be found to belong to the scirrhous lymphoblastomatous type, and that such cases may be due to an organism. Recently many observers believe that the diptheroid bacillus described by Bunting, Yates and Rosenow and found in the glands and blood stream is causative. The terminology is as confusing as the varieties of conditions earlier grouped under the name of Hodgkin's.

Characteristics of the Glands. Early the lymphoid cells are proliferated, with many large pale cells with indistinct nuclei, replacing the normal structure of the gland. There are some large cells which are clear in outline, structure and nuclei. Later the glands become fibrous due to firm connective tissue.

Other regions of the body than the neck also have similar lesions.

Diagnosis. Tuberculosis is excluded by a negative skin test and from the absence of tubercles in the section of the gland tissue, and in the freedom from breaking down and matting together of the adjacent glands. Sarcoma is more rapid in growth and the histology usually diagnostic.

Course. The disease is more common in boys. It lasts less than three years, begins in one side of the neck and spreads to any part of the body, the spleen, liver, retroperitoneal glands, skin, etc.

Death is due to asthenia, suffocation,

acute infection with fever and gastro-intestinal symptoms.

Treatment is unavailing. Roentgen therapy causes early a rapid but transient remission. Arsenic has never cured a case. Removal of foci of infection in tonsils has been advocated. Tracheotomy may be necessary to prolong life when the pressure in the thorax becomes intolerable.

———Ꞵ———

Further Studies on the Dick Test

P. S. Rosen, P. B. Sadowski and L. A. Korobicina, Moscow, Russia (Journal A.M. A., Nov. 28, 1925), have made 2,487 Dick reactions on healthy persons, among the inhabitants of the small manufacturing town Jarcewo. The reaction was made with the toxin of the Metchnikoff Isntitute, purified after the Hentoon process. The strength of the toxin was 1:500. They have obtained 867 positive and combined reactions, or 34.9 per cent., a lower percentage than that obtained in Moscow. This difference may be explained by the fact that there was an epidemic of scarlet fever at Jarcewo. Out of twenty-nine old persons, most of whom were over 60, there was only one with a slight positive reaction. It is noteworthy that during the epidemic of scarlet fever in the Farroer islands at Tjornshown, there were ill with the disease only 2.9 per cent of the inhabitants between the ages of 40 and 60 years, and only 1.8 per cent of the persons over 60. Of 179 persons who declared they had previously been ill with scarlet fever, 63, or 35.2 per cent, showed a positive or combined reaction. Very young children in families with a higher standard of living had a retarded spontaneous immunization and gave a higher percentage of positive reactions. At the age of 6 and over, this difference was found to disappear; a condition that probably may be explained by the fact that children at this age begin to attend school, where all groups are subjected to equal conditions. As soon as children reach the age of adolescence, if their living conditions are good, they show a quick decrease of percentage of the positive reaction, while others who are deprived of good living conditions show only a slight decrease from 32.6 to 30 percent. Apparently, persons subjected to bad living conditions are more liable to get sick. Among 867 children with positive and combined Dick reaction, there have been only seven cases of scarlet fever; so far all of them showed a negative Dick reaction after their recovery. Among 1,620 children with negative and pesudonegative recations, there has been no case of scarlet fever.

———Ꞵ———

The Dietetic Factor in the Etiology of Chronic Nephritis

Two facts stand out prominently in the experimental work that has been done by L. H. Newburgh, Phil L. Marsh, Sarah Clarkson, and A. C. Curtis, Ann Arbor, Mich(Journal A.M.A., Nov. 28, 1925). In the first place, diets containing excesses of protein produce urinary abnormalities in the omnivorous rat. In the second place, the rate at which evident abnormalities develop is dependent on the amount of protein fed and the length of time the diets are used. The results are believed to justify the statement that protein above certain limits is injurious to the kidneys of omnivorous as well as herbivorous animals. Since protein is absorbed from the intestine as its amino-acids, it was thought possible that information could be obtained by their injection into normal animals. The authors have injected intravenously into normal rabbits and puppies twelve of the amino-acids that result from the digestion of protein. Of these, no evidence of injury was obtained from the glycin, alanin, phenyl-alanin, glutamic acid, leucin and arginin. Of the remaining six, aspartic acid was injurious to the kidneys of rabbits, but not to those of dogs, whereas lysin, histidin, cystin, tyroson and tryptophan gave unequivocal evidence of renal damage as the result of their injection into the circulation of both rabbits and dogs. In the cases of the last three, in particular, not only were marked urinary abnormalities obtained, but also the microscopic examination of kidneys showed extreme parenchymatous injury. It is quite evident that excess of protein is a contributory factor in the etiology of chronic nephritis. For example, focal infection alone might not seriously damage the kidney. Excess of protein alone might not seriously damage the kidney. Focal infection and excessive ingestion of protein in the same subject are a combination of circumstances that commonly result in chronic nephritis.

———Ꞵ———

The Burlington doctors, dentists, and druggists meet every Monday evening at one of the cafes, and after eating supper together adjourn to some one of the doctor's offices where they have impromptu talks and occasionally a paper on some medical subject.

THE JOURNAL
of The
Kansas Medical Society

W. E. McVEY, M.D. - - Editor

ASSOCIATE EDITORS—SAM MURDOCK, L. B. SPAKE, P. S. MITCHELL, O. P. DAVIS, J. T. AXTELL, E. S. EDGERTON, E. G. MASON, J. D. RIDDELL, C. S. KENNEY, D. R. STONER, J. A. DILLON, W. F. FEE.

Subscription Rates. $2.00 per year, 20c single copy. Advertising rates furnished promptly on application.

LIST OF OFFICERS—President, F. A. Carmichael, Osawatomie; Vice President, B. F. Morgan, Clay Center; J. E. Hawley, Burr Oak; F. H. Smith, Goodland; Secretary, J. F. Hassig, Kansas City. Treasurer, Geo. M. Gray, Kansas City.

COUNCILORS—First District, Sam Murdock, Sabetha; Second District, L. B. Spake, Kansas City; Third District, P. S. Mitchell, Iola; Fourth District, O. P. Davis, Topeka; Fifth District, J. T. Axtell, Newton; Sixth District, E. S. Edgerton, Wichita; Seventh District, E. G. Mason, Cawker City; Eighth District, J. D. Riddell, Salina; Ninth District, C. S. Kenney, Norton; Tenth District, D. R. Stoner, Ellis; Eleventh District, J. A. Dillon, Larned; Twelfth District, W. F. Fee, Meade.

WHAT KIND OF LEGISLATION?

There are always some among us who are desirous of having more laws, or better laws, or having some changes in the laws that already exist. At every session of the legislature hundreds of new laws are proposed, and yet nearly every one, even those who propose the new laws, recognizes it as a fact that there are already far too many laws on our statute books.

Better laws, if they are intended to serve a good purpose and to replace others, are always desirable, but any attempt to change a law already in force is always a speculation and the result may be disastrous.

The medical practice act which was passed twenty-five years ago is a very satisfactory law, in so far as it applies to doctors of medicine. It does not accomplish all that was expected for the present situation was not anticipated. That there would be an influx of poorly qualified men and that it would be possible for these men to secure special legislation permitting them to practice medicine, did not occur to those who were instrumental in securing the passagge of the practice act.

Had this possibility been recognized and the law properly framed there would now be no occasion to seek further legislation to regulate the practice of medicine. When the present law was passed there were but three schools of practice and each of them was recognized, and provision made for representation of each on the board of examiners, and also it was provided that special examinations should be given in certain subjects to the applicants for license from each school.

When a new school, or cult if you please, came into existence there was no provision for licensing its disciples and naturally a special law defining the qualifications for licentiates of that school and providing for a board of examiners was asked for and secured. Why not? When still another cult appeared and asked for similar privileges, it also was granted a special law and a special board. Should another cult appear and ask for a special law and a special board of examiners, it will no doubt be accorded a similar favor. Why not?

From the legislator's point of view at least, the medical practice act was a piece of special legislation, requested by and granted to the three schools of practice then in existence, recognizing each and providing special privileges to each, as requested. There was no monopoly on legislative favors in this act however, and when a new school appeared it was perfectly in harmony with the previous attitude of the legislature to pass further special laws.

The error consisted in the recognition of the three schools. Had the medical practice act simply provided that certain qualifications were required of all those who desired to practice any form of healing there would have been no occasion for further special legislation. That kind of a law could have been passed at that time just as easily as the one that was passed. Such a law could have been passed a few years ago, had the legislative committee of the Society and the commission appointed by Governor Hodges been unanimously in favor of it. Such a law could be passed now or at any other time if its scope were properly explained to the legislators and if the medical profession would unanimously endorse it.

A law requiring every one who practices the art of healing in any form to have a

practical knowledge of the basic principles of what we are accustomed to term medicine—definite knowledge of the structure, the functions and the pathologic changes of the human body—will appeal to any legislative body when it is unuerstood. Laws of this kind have been passed in other states and have proven to be quite satisfactory to all concerned. It does not provide for special methods of practice, but it does provide that the practitioner shall know enough not to endanger the lives or health of the people. Such a law is readily recognized as not being in the interests of any particular school of practice, but is really for the protection of the people.

PERIODIC EXAMINATIONS.

Efforts are being made in other states to popularize the periodic examination of the apparently well. Where the profession has gone into a well prepared program with unanimity and cooperation an encouraging degree of success has been achieved. This does not mean that any large proportion of the population has yet acquired the habit, in any particular section of the country, or where there is no inducement or no obligation other than ones interest in his own state of health. And it is pretty generally conceded that some time must elapse before the public will be generally convinced of the importance of such examinations.

It has been suggested, and the suggestion seems a very excellent one, that the habit should first be created in the children. Parents are usually more concerned with the health, the growth and the physical and mental development of their children than with themselves, and they can readily see the advantages to be gained by having their children examined once each year. The habit once established in childhood will be likely to persist in adulthood.

Considerable impression has been made among the more intelligent people in communities where a real effort has been made to develop the idea.

For some reason the profession in Kansas has not taken to the idea with any particular enthusiasm. So far no definite plans for a general campaign have been considered by the Society. The American Medical Association has had the subject under consideration for several years and its committee has prepared a manual of sugestions for the conduct of these examinations, which describes in considerable detail the extent of the examinations that should be made and how they should be made. The committee has also prepared blanks for the use of the examiner.

The general plan as outlined by the committee contemplates an annual examination of each individual on his birthday, this examination to be conducted by the family physician. It is also understood that a fee should be charged for each examination, and since the examinations are uniform, a standard fee should be determined for each community and every physician in that community should charge the same fee.

Each county society should consider this campaign as a part of its legitimate function and should fix the proper fee and prepare necessary rules for the government of its members in this kind of work.

It may be worth while to consider, as a means of popularizing the custom, the plan of making one examination in each family free of charge. Each member of the Society might be permitted to announce to his regular patrons that he would examine free of charge one member of the family on his or her next birthday.

What shall be the amount of the fee? The examination is perhaps a little more inclusive than the ordinary life insurance examination. It is doubtful if people would be willing to pay more for it, and it is certain that physicians cannot afford to do it for less.

It is time the physicians in Kansas made some move to take advantage of the propaganda that has already been put forward for this work. The plan deserves consideration and the people are beginning to appreciate its importance. Some of them, perhaps a good many, are already patronizing the comercial evamining clinics which make a profit from the work actually done by local physicians.

PROMISCUOUS INTRAVENOUS THERAPY.

Intravenous therapy is not a new method of drug administration. There are records which indicate that remedies were administered in this way by the early Egyptians. There are quite authentic reports of intravenous therapy a couple of centuries ago. That the practice was abandoned, perhaps many times, is suggested by its occasional mention in histories covering long periods. No matter how efficient this method of drug administration may be when used with circumspection, it is not improbable, in fact it is most probable, that it will again be abandoned and probably for the same reasons as before.

That it may have an important place in therapeutics may readily be conceded, but it does not follow that it can supply every need, that it can be used indiscriminately, or that it can be used with impunity in any case. The experimental work which has recently been reported shows at least that there are some drugs which when introduced into the veins do set up pathologic changes of more or less significance. Negative results in such experiments, however, do not necessarily mean that the drug giving such negative results will cause no damage. It has formerly been an accepted hypothesis that a slight irritation may cause a mild low grade inflammation in the vascular system, resulting ultimately in lesions of sufficient magnitude to produce definite symptoms. If irritants resulting from faulty elimination may produce such reactions, it is not unreasonable to surmise that similar results may follow the mechanical introduction into the blood stream of at least some of the great variety of chemical agents that are now used in that way. That no detrimental effects are immediately observed hardly justifies the conclusion that the method may be practiced with impunity and that agents which produce intense reactions, even necrosis, in the skin and subcutaneous tissues, may be introduced into a vein and pass through the circulation without causing any reaction in the blood-vessels.

Until further investigations of immediate effects have been made, and further time has been allowed for the determination of remote effects, a maximum degree of caution is advisable. There has been abundant material for necropsies, in cases where various agents have been administered intravenously as a last resort, to determine the immediate effects upon vascular structures in the human. In the years to come, if case histories are carefully preserved, the manifestations of the more subtile arterial changes may be recognized and their etiology properly fixed. The biochemist might render inestimable service to the profession in determining the effects of some of the agents used upon blood chemistry.

It is at any rate well to adopt a conservative policy and restrict our intravenous therapy to those agents known to be harmless and which cannot be just as effectively administered by mouth.

———B———

CHIPS

Skill of itself does not insure success. It must be leavened with the human equation —tact.

"Dermatology is in the "silk stocking class" in the family of specialists in the practice of medicine. The patient never gets the doctor out of bed at night, never dies and never gets well."

The biologist has concluded that the chromosomes of the nucleus of the cell are the carriers of inherited characteristics of the living organism, in animals and man.

The *cosmic ray,* it is said, is one-hundred times more penetrating that the most powerful x-ray. Robert A. Milliken, the Noble Prize winner and president of the California Institute of Technology, and his assistants are the discoverers. "They conclude that the atomic energy generated on earth from radium and thorium is insignificant compared with the energy of the rays of cosmic origin. The most penetrating rays produced in our hospitals cannot go through half an inch of lead. But these cosmic rays originating somewhere out in space are at least one hundred times more penetrating than those."

Our California correspondent suggest that the only class of pseudo doctors who can handle these cosmic rays with safety at the present time are the chiropractors.

There is considerable clinical evidence of

the peculiar fact that septic focus in which a definite bacterial infection is demonstrated, may give rise to an inflammatory reaction, in another part of the body, which is bacteriologically sterile. Any explanation of this phenomenon is theoretical but it is presumably due to the bactericidal action of the tissues or of the fluids of the part to which the organism has been conveyed, and the inflammatory reaction is caused by the bacterial products.

In an article recently appeared in the *Hahnemanian Monthly* Crump suggests that "packs and taped sponges are best when made of flannel, as they lessen traumatism, retain heat for a longer time, remain resilient and do not pack down as does gauze." Besides the considerable difference in expense there are several objections to the use of flannel for this purpose.

From a study of fifty cases in which routine physical and mental examinations were made, including laboratory tests, blood, examinations, basal metabolism, sugar tolerance tests and tests of endocrine functions, Hall and Neyman (*Journal of Nervous and Mental Diseases*) conclude that the term "dementia precox" represents a clinical syndrome and not a disease entity. They suggest that the cases studied may be divided into groups such as a schizophrenic reaction type associated with toxic conditions, second, with endocrine disturbances and third, with psychogenic disturbances.

Two conditions are necessary for the formation of pus—positive chemotaxis and cell necrosis—and any substance that will produce these conditions *may* cause suppuration. Although bacterial infection is the usual cause, bacterial proteins from nonpathogenic bacteria may cause it, as may certain chemical agents, such as oil of terpentine, mercury, croton oil, and silver nitrate solutions. While pus will not be produced except under these two conditions, one other condition is required—the presence of digestive enzymes for the digestion of the necrotic cells. These enzymes may be derived from the leucocytes, from the infecting bacteria if any are present, or from the fixed tissue cells. In exudates rich in serum, however, the enzymes may be inhibited by the serum and pus not be formed.

Masao Fujihara pointed out the fact that in central glycosuric cases, glycogen was formed in the mucous membrane of the digestive tract, especially of the cecum, from the blood sugar. He further suggested that the mucous membrane might play an important part in hyperglycemia. (*Japan Medical World.*)

The medical profession in Germany is apparently interested in educating the people in matters of health. It is reported that some of the most eminent physicians there have accepted invitations to lecture to the trade unions in the industrial city of Essen. Among the lecturers are Prof. Sauerbruch, of Munich, on the surgical treatment of tuberculosis; Prof. Rubner, of Berlin, on fatigue; Prof. Thomas, of Leipzig, on self-government of the human body; Prof. Krehl, of Heidelberg, on the prophylaxis of infectious diseases; Prof. Aschoff, of Freiburg, on the value of autopsies and of experiments on animals for the public health; Prof. His, of Berlin, on the circulation of the blood and its derangements. These are subjects that might be utilized to good advantages in this country for public addresses.

Mechnikoff believed that if man escaped accident and disease the inherent vitality of his tissues was sufficient to make him live one hundred years. Sir Arthur Keith holds that the facts show that forty-five years was the span of life allotted to man. In support of this he cites the functional failure of the lens of the eye at forty-five, all the elastic tissues and cartilages of the body lose resiliency by the middle of the fifth decade, the normal child bearing period of women also ends at this age.

Whether our allotted span of life is one hundred years, seventy years or forty-five years it is certain that some of us live too long and others do not live long enough.

Intravenous injection involves difficulties of technic, with the possibility of local injuries to the peripheral blood vessels at the seat of operation. It presents dangers of bacterial contamination; the vehicle as well as the drug is immediately foreign to the blood, and other objections have presented themselves. The Council on Pharmacy and Chemistry has taken a decidedly conservative attitude toward the recognition of the scores of products intended for direct intravenous use. The wisdom of this stand has been attested anew by a recent report of Hanzlik and his collaborators who report that a large variety of substances cause definite and important changes in arterial blood of test animals, accompanied as rule by disturbances in

physiologic function. (Jr. A.M.A., Nov. 21, '25.)

New and Non-official Remedies brings out that there is considerable evidence in favor of the therapeutic value of soured milk—particularly of sour milk cantaining an abundance of living *B. acidophilus*, Whereas the administration of *B. acidophilus* has for its object the implantation of living *B. acidophilus*, there are reports which indicate that the administration of milk sugar may produce the same results through promoting the growth of aciduric bacteria normally present in the intestinal flora. (Jr. A. M. A., Nov. 14, '25.)

———R———

KANSAS MEDICAL LABORATORY ASSOCIATION

COMPARISON OF KAHN TEST AND WASSERMANN REACTION.

(Abstract of report before the Kansas State Medical Laboratory Association, at Emporia, Kansas, spring, 1925, by Cornelia M. Downs.)

An analysis of 24 articles recently published comparing the Kahn test with the Wassermann test shows the results for 14,945 cases. The per cent of cases giving complete agreement range from 60-100 per cent, those giving partial agreement from 11-33 per cent, and complete disagreement from 8-21 per cent. This would indicate a great variation in the results of the different workers. Five authors considered the Kahn test more sensitive but did not give figures. Six authors considered it more sensitive in from 3.3-79 per cent of cases, here again the great variation is to be noticed. Four authors state that the Kahn test is considerably less sensitive than the Wassermann. Only three authors out of a total of 29 state that the Kahn test is just as reliable as the Wassermann. The majority state that the test may be useful as a supplementary test to the Wassermann but that it can not be substituted for the Wassermann. Several state that higher accuracy is obtainable using both than with either alone. The advantage of simplicity and the lack of interference by anti-complementary sera is emphasized.

On the whole it would seem that the test compares favorably with the Wassermann but that it has not reached the stage of perfection where it can supplant the Wassermann.

NOTES ON BLOOD CHEMISTRY

J. L. Lattimore

The cloudiness of the unknown in blood urea determinations, claims to be solved by Frank B. Cooper of Trudeau, New York. According to his article the cause for cloudiness is the addition of an excess of caprylliness is the addition of an excess of caprylic alcohol used to prevent foaming. He in my hands, this amount will not prevent foaming for sufficient time to insure the removal of all ammonia into the acid solution. Using the amount he recommends, according to his method, I obtained a cloudiness within a few minutes. This subject is yet unsettled and deserves considerable study.

CLINICAL PATHOLOGISTS STANDARDIZE

The American Society of Clinical Pathologists has undertaken the proposition of standardizing the laboratories of its members. The Kansas Medical Laboratory Association has talked this for a number of years and each year brings us nearer to this step. Our duty is to render an efficient service, and surely standardizing our technique and methods will only help to render a more efficient service.

NOTES ON LABORATORY DIAGNOSIS OF DIPHTHERIA.

By Clara Nigg, Department of Bacteriology, University of Kansas.

Throat Examinations. The common etiological factors in tonsilitis are streptococci, diptheria bacilli, and B. fusiformis with the accompanying spirilla of Vincent's angina. Mixed infections are not uncommon. The organism primarily sought for is always B. diptheriae. The occasion for a laboratory examination may be diagnosis, carrier determination or release from quarantine. Below are listed some important points in the laboratory diagnosis of diphtheria.

Loeffler's Medium. To which 5 per cent glycerine has been added will be found to remain moist much longer than it does without glycerine. This is of particular advantage where the medium is supplied to a large territory to be kept on hand by physicians for occasional use. Corks wrapped in cotton will help prevent undue drying.

Obtaining Cultures for Examination for Diphtheria Bacilli. Since there are so many cases of nasal diphtheria on record in which the throat cultures are consistently negative, it should be borne in mind that separate nose and throat cultures should be taken. This is most essential where examinations are made, as in schools, for carrier determination. If only throat cultures

are taken, dangerous carriers are sometimes overlooked.

Examination of Cultures. Wherever possible a Loeffler's tube should be inoculated and a slide made with the swab as soon as it is obtained. If this is impossible, the swab should be sent to the laboratory as once so that the medium can be inoculated before the swab dries. The drier the swab the fewer the chances are for a positive culture. Upon receipt of the swab or slide, a microscopic examination should be made immediately and the results reported to the attending physician without delay so that the proper treatment may be given. Doctor Martin Dupray reported to the Association some time ago that he had obtained over 90 per cent positive results by direct smear as compared with cultures. He emphasized the importance of time, patience and experience as necessary to get a high percentage of positive results by direct smear. Direct examination saves time which is very important to successful treatment with antitoxin. The diagnosis from a direct smear should always be confirmed by culture examination—whether the first diagnosis is positive or negative. The stain used is largely a matter of choice, though on the whole for diagnostic work, Loeffler's Methylene Blue is doubtless the most satisfactory for bringing out both morphology and metachromasia, as well as the organisms of Vincent's augina, which do not appear in ordinary cultures. The various special stains which have been devised are largely for the express purpose of demonstrating more readily metachromatic granules. In preparing the film, the smears should be representative of the whole growth. It is undoubtedly a mistake to attempt to select characteristic portions of the growth. A culture which shows suspicious-looking organisms should be reported promptly as "Suspicious" with a request for another culture, so that the physician may institute treatment if it is indicated by the symptoms.

Virulence Tests. Virulence tests should be done on cultures from the following types of cases:

1. Positive cultures from cases without clinical symptoms. Such cases should be held in quarantine until the results of the virulence test are obtained.
2. Positive nose cultures accompanied with negative throat cultures.
3. Cases which show positive cultures longer than four weeks after clinical recovery. Ordinarily the diphtheria bacilli isolated from such cases will be virulent, but a sufficient number of cases are on record showing virulent bacilli replaced by avirulent types to warrant making a virulence test on such cultures.

Method of Isolation for Virulence. A very successful method of isolating the diphtheria bacillus from a mixed culture is in use by the Minnesota State Board of Health. Instead of pouring and streaking serum agar plates as is done in most laboratories, the method in use there is to inoculate six or seven Loeffler's slants successively, flaming the needle between each inoculation and reinoculating from the last slant just inoculated. For this purpose a square "loop" about 7 mm. x 5 mm. is very practical, since the entire surface can be seeded in this way with two or three strokes. This method insures well isolated colonies within twenty-four hours. The fishing can be done with a needle bent at right angles at the end, the hook being about 2 mm. If the medium has water of condensation on it, the tubes should be held upright to avoid the confluence of colonies. The individual colonies may be transferred to separate slants or three or four may be transferred to a single long slant, by confining the area inoculated to narrow horizontal strips across the slant. In routine work no difficulty is encountered in getting well isolated colonies and the method has the particular advantage of obviating the necessity of keeping sterile serum, sterile petri dishes and agar on hand for that purpose. Moreover, a great deal of time is saved if the plates do not have to be prepared as they are needed.

This method of isolating an organism from mixed cultures will be found to be very satisfactory in general work, and can replace the petri dish method in most instances.

Release Cultures: Two or three consecutive negative cultures from both nose and throat should be required before release from quarantine. Under no circumstances should a patient be released on a direct smear examination which is negative. All laboratory workers know that the direct smear may fail to reveal the diphtheria bacilli even at the heighth of the disease and certainly, as a case clears, the organisms become fewer so that they are sometimes missed even in smears made from cultures. One should be particularly chary about granting quarantine release to laryngeal cases, as throat cultures are very often

negative throughout the course of the disease in such cases. Diphtheria can be reduced to a minimum if laboratory workers are sufficiently conscientious in the matter of release cultures. Tonsillectomy is recommended by the Minnesota State Board of Health for clearing up persistent carriers.

Question: How do you fill the small inverted vials in the Dunham Fermentation tubes?

G————.

Answer: Put inverted vials in test tubes, add the desired carbohydrate broth (about 10cc), plug tubes and sterilize in autoclave for desired period of time and at desired temperature. When the tubes are removed it will be observed that the inverted vials are filled. The vacuum produced in the autoclave has removed the air and hence the tubes fill.

DEATHS

Dr. George W. Akers, aged 86, died at Stafford, Kansas, in September. He was graduated from Indiana Medical College, Indianapolis in 1878.

Dr. J. A. Pinney, a pioneer physician of Wilson, Kansas, died at the home of his son in Mounville, Wyoming, November 3.

Dr. Frances A. Harper, aged 56, of Pittsburg, Kansas, died recently according to a notice received from the post-office. Dr. Harper graduated from the Kansas Medical College in 1904 and has practiced in Pittsburg for a number of years.

PERSONALS

Dr. J. H. Dittemore has moved from Tipton to Linn, Kansas, where he has taken the offices formerly occupied by Dr. Webster.

Dr. J. F. Hassig and the editor of the Journal attended the annual conference of secretaries and editors at the A. M. A. headquarters in Chicago, November 20 and 21.

Dr. V. P. Booth who was located in Salina recently has moved to Kingman, Kansas.

Dr. C. A. Higdon has moved from Atchison to Ottawa, Kansas.

Dr. W. G. Attwood, who was for a short time located in Topeka, is now in Glendale, California.

Dr. Geo. P. McCoy, formerly of Neodesha, Kansas, is now located in Covington, Virginia.

Dr. W. E. Cary has moved from Russell Springs to Fort Scott, Kansas.

Dr. H. E. Hawley has moved from Hudson to Englewood, Kansas.

Dr. L. R. Sefarik, formerly located at Haven, Kansas, is now located at 1437 E. Virginia Ave., Denver Colorado.

Dr. C. L. Ramsay has moved from Everest to Waterville, Kansas.

Dr. and Mrs. H. T. Salisbury of Burlington have returned from a six weeks trip in the Ozarks. The doctor has some loud stories to tell of his sightseeing.

SOCIETIES

Wilson County Society

The Wilson County Medical Society held its regular November meeting at Altoona, Monday evening, November 9th. A banquet was served to the doctors and their wives by the church ladies at six P. M. at the Methodist Church Basement.

After supper the ladies went to the home of Dr. Addington, where they spent a pleasant evening.

The doctors held their meeting at the Hotel Rainey parlors. Dr. Flack read a paper on anaphylaxis and serum sickness; Dr. Addington one on goitre. Both papers were fully discussed and many points made clear; or at least clearer than they were before, especially about the action of protein in the system.

This is the second time this summer and fall that our society has entertained the ladies; and the idea seems to be popular in this county.

While we have no "Master minds" or "Super-men" in our society, we have students of medicine, and by getting a little from, Tom, Dick, and Harry, we seem to absorb a lot of information from our monthly society meetings; we not only brush up on the older things, but we study and discuss the latest things too.

The December meeting will be held in Neodesha, December 14th.

E. C. DUNCAN,
Secretary.

Ford County Society

The Ford County Medical Society at their annual election, December 1st, 1925,

elected the following officers for the year 1926:

President, Dr. C. E. Bandy, Bucklin, Kansas.

Vice President, Dr. J. G. Janney, Dodge City, Kansas.

Secretary-Treasurer, Dr. W. F. Pine, Dodge City, Kansas.

Censors: Dr. G. O. Speirs, Dr. N. E. Melencamp, Dr. F. M. Coffman.

Delegate to state meetin, Dr. C. E. Bandy, Alternate, Dr. G. O. Speirs.

W. F. PINE,
Secretary.

MARSHALL COUNTY SOCIETY

At the recent meeting of the Marshall County Medical Society held in Marysville the following officers were elected for 1926: J. L. Hausman, Marysville, Presifent; M. Brawley, Frankfort, Vice President; J. W. Randell, Marysville, Secretary.

With the exception of one or two, all active men in the county belong to the county society.

Marshall County was represented at the Northeast Kansas Medical Society at Topeka by Dr. Brady, Dr. McAllister, Dr. Roney and Dr. Randell.

The Physicians' Home, Inc.

The campaign to establish an endowment fund for The Physicians' Home, the first small unit of which is already in service at Caneadea, N. Y., was launched Monday, November 23, at the Waldorf-Astoria, New York. An impressive gathering that included men and women prominent in medicine, financial and other fields heard noted speakers outline the purposes of the campaign and laud the movement. A number of substantial donations were received indicating the interest of the profession and the public.

Excerpts from the addresses of speakers follow:

United States Senator Royal S. Copeland, M.D.:

"I hope and trust that there are people enough in this country who appreciate the sacrifices made by the medical profession so that there can be abundant money raised to build a home big enough to take care of all the doctors who need it. I do believe there is that in the heart of the people who have been served by the medical profession to make them glad to furnish the money to build and equip this home."

Congressman John J. Kindred, M.D.:

"From every sentimental standpoint, from every humanitarian standpoint, from every practical and economic standpoint, there can be but one conclusion as to the urgent necessity for a national physicians' home. Of course it must not be left out of the consideration that this home, in order to be a real credit and a blessing to physicians and to our nation will require a vast deal of money. I am very sure that this great humanitarian plan shall not fall through because of lack of plenty of money."

Samuel Untermeyer:

"Above and beyond all professions and occupations, and quite in a class by itself, stands the physician's as the emblem and personification of a life dedicated to public service in its highest sense. In that respect the ethics and practices of your great profession are unique. From the obscure, patient, overworked country doctor, who toils at all hours by day and night relieving suffering and ministering alike to the poor and the rich, to the men who have climbed to the top and have attained national and international fame, *"service"* has been the key-note of their lives. It is no exaggeration to say that fully one-half of their professional lives are devoted to public and charity work. Every hospital is equipped with a staff of eminent specialists whose time thus freely contributed could not be had for money. To your ever lasting credit be it said that no man can attain the highest professional eminence who does not participate in this service.

"I believe that there will be a quick and generous response to this appeal. To think otherwise would be to lose one's faith in the sense of justice of our people.

"I wish you every success and pledge you my fullest support." Rabbi Israel Goldstein, representing the N. Y. Board of Jewish Ministry:

"The physician, most of all, is society's creditor. Mankind will never be able to pay its debt to its physicians and that debt is owing to the humblest among them, because from the bottom to the top, or rather from the top to the bottom, the physician is a servant of God and a servant of man; the physician is the hero and the martyr, whose martyrdom is little heeded, because it is so usual, and therefore I feel confident, men and woman, that this project will earn the support of men and women from all walks of life, for anyone to whom the name of physician means service cannot refrain from holding up your hands, Mr. Chairman, in this noble work you are

launching tonight. That the medical profession itself will support it, is beyond question, first, because the strength of a profession is measured by its organized solicitude for its weakest members, and surely the medical profession will not be adjudged anaemic, and second, because benevolence toward the weaker colleague is to be expected of the physician most of all. In the course of his daily duty, he sees it every day. To the layman, in the full robustness of health and prosperity, it may be necessary to make an appeal to the imagination, and draw before his mental eyes pictures of need, but he, too, will respond."

Dr. Walter P. Bowers, Editor, Boston Medical and Surgical Journal:

"I want to extend to you as far as I am able the spirit of co-operation which I am sure exists in Massachusetts, and how far you may be able to go in co-operation with this organization which already exists, I am unable to say, but it seems to me very proper—and I hope it can be brought about —that our State organization may in some way co-operate with you, even if it does not become absorbed in your larger plan."

Dr. Morris, President of the Home:

"None of the doctors are to be subjected to institutional methods. They will be free to come and go as they please. Those who have nothing will pay nothing. Those who can afford to pay for part or all of their care (and there are many such) will be allowed to do that.

"The Directors of The Physicians' Home are all busy men actively engaged in professional work and receiving no compensation for their time and labor, willingly expended in this charity, the need for which has been brought so strongly to their attention. They feel that it is time, in the larger development of the institution to secure an endowment which will allow them to transfer the responsibilities to men who are trained in social service relating to institutions."

Dr. William H. Dieffenbach:

"It was my privilege, some three or four years ago, to become interested in the Physicians' Home, and I became very deeply interested, owing to the fact that a woman physician whom I had known for a number of years, who had devoted over 45 years of her existence in taking care of the public, serving in the clinics, and in teaching others as a volunteer, had reached a stage in life and in circumstances that prevented and precluded any further activities. She called at my office and this concrete example I think will bear the whole project home to every one of you and bring it right to a focus so that every one of you will understand the importance of this.

"She said, 'Doctor, I have just one thousand dollars. I am 71 years of age. All the to go into a poorhouse. What shall I do?' rest of my family have died. I do not wish I had received the literature of the Physician's Home a year before, and had subscribed in a small way, and I had their literature before me at that time. I told the lady that I would see if I could get her into this home that we were speaking of. Without the slightest difficulty, Dr. Morris and his colleagues admitted this lady, a lady of very high culture. I myself accompanied her to the Home. She received a welcome there. She inscribed her name in the book as a guest, just as she would at a hotel. She received a private room, with things that the ladies like, plenty of closet room, and she was at home. She was in a very bad nervous condition. She was in a state of health that foreboded the worst. The air, the splendid country around Caneadea, built her up, and after six months of gratuitous board at that place she was able to find, amongst some distant friends, another home to which she afterwards went. It meant the saving of life of this very fine, cultured woman."

Don C. Seitz, of the New York World:

"It is a curious thing about humanity. Away down at heart, it thinks that the doctor, the clergyman and the editor ought to work for nothing and board himself. I know from experience, because my father was all three. He began life as a doctor, passed many years as a clergyman, and wound up as an editor, and had the opportunity to experience this feeling in each of these capacities. Why it should be so I do not know, but I know that it is true, and I know that we do not half appreciate the sacrifices of the three professions in this great and noble land. I hope some effort will be made to extend this movement outside the profession. I know what it means, and I know one thing that you ought to do: You ought to stretch this movement out. Don't put too much on your own shoulders. Remind the public that this need is their need."

Campaign headquarters have been established in the Times Building, Times Square, New York. Contributions should be forwarded to that address, in care of the treasurer, Albert G. Weed, M.D. Other officers and directors are Robert T. Morris, M.D., President; William H. Diffenbach,

M.D., Vice-President; Silas F. Hallock, M. D., Secretary; and Drs. Warren Coleman, Max Einhorn, Wolff Freudenthal, J. Richard Kevin, Stephen V. Mountain and Ralph Waldo.

It was disclosed at the inaugural banquet that of the more than 140,000 physicians in the United States approximately 5 per cent are incapacitated. It is these the Home seeks to serve.

BOOKS

Intravenous Therapy, its application in the modern practise of medicine by Walton Forest Dutton, M.D. Second Edition. Published by F. A. Davis Co., Philadelphia. Price $6.00.

Intravenous therapy seems now to be an established method of adminstering drugs. It is, however, being used by men who have neither the knowledge or experience to use it safely. More definite information is needed. In the second edition the author has added whatever his own experience and the reported experience of others has seemed to justify in this particular line of drug administration.

Radiography, a manual of X-Ray technique, interpretation and therapy by Charles D. Enfield, M. D. Published by P. Blakeston's Son & Co., Philadelphia. Price $10.00.

According to the author's announcement this book is written for the medical men who, though not roentgenologists, find it necessary to do some or all of their x-ray work. He describes a technique for each of the ordinary routine examinations and gives some very valuable points in the interpretation of the commoner lesions. The author has supplied a very practical book of instructions and has presented the subject in such explicit terms that there should be no difficulty in following the instructions. The illustrations are particularly instructive.

Submucous Endocapsular Tonsil Enucleations by Charles Conrad Miller, M. D., published by F. A. Davis Co., Philadelphia.

The author suggests that there is room for improvement in the procedure and in the technic in removing tonsils and he describes an operation for removing the tonsillar lymphoid and reticular tissues leaving the mucous membrane covering of the anterior aspect of the tonsil and the base membrane upon which the tonsil rests. Pericapsular cellular tissues beyond the base membrane of the tonsil are not invaded.

In addition to a description of the operation the author offers some very important suggestions on the general subject of tonsillectomy.

Insect and Disease of Man, by Carrol Fox, M. D., Surgeon, U. S. Public Health Service. 92 illustrations, 8 volumes, XII-248 pages. Cloth $4.00. Published by P. Blankisten's Son & Co., Philadelphia.

This is a practical work on medical entomology, and is intended for field health officers, physicians, entomologists, and others. The first part deals with the classification, identification, anatomy, life history, and general considerations.

The second part discusses the diseases carried by anthropods among human beings. Under each disease is given the causative agent, source of infection, mode of transmission, period of incubation, communicability, epidemiology, recognition of the disease, prevention and control, treatment of carriers, prophylaxis and all practical points.

Physiology, a text book by William D. Zoethout, Ph. D., Professor of Physiology in the Chicago College of Dental Surgery and in the Chicago Normal School of Physical Education. Second edition. Published by C. V. Mosby Co., St. Louis. Price $4.50.

This book has been prepared to strike a happy medium between the too elaborate works and the too condensed ones. He has attempted to present this subject with clearness of diction. Physiology is a very large field and the author who can present all the facts clearly and concisely is to be complimented. This is not a handbook, but one of six hundred pages well illustrated and well printed.

The Therapy of Puerperal Fever, by Privatdozent Dr. Robert Koehler American edition prepared by Hugo Ehrenfest, M. D., associate in Obstetrics, Washington University School of Medicine. Published by C. V. Mosby Co., St. Louis. Price $4.00.

This is an exhaustive treatise on the subject. The author says: "The overproduction of partly baseless therapeutic suggestions undeniably is responsible for the existing meddlesomeness which proves far from advantageous to the patients." Prevention is of course given a most prominent place in his discussion. In the management of puerperal infection the author mentions many of the usual procedures for the purpose of telling us why they should be condemned. He has drawn upon his own large experience for many of his conclusions.

The Medical Clinics of North America (Issued serially, one number every other month.) Volume IX, Number III, New York Number, November,

same functional explanation. Vascular disease or other local peculiarities may make the conditions less clear-cut in the kidneys than in the pancreatic islands. One difference must be recognized in the fact that functional rest of the pancreatic islands clears up glycosuria, while functional rest of the kidneys does not usually clear up albumin and casts. On the other hand, it is also known that albumin and casts are not trustworthy signs of the progressiveness of a case. With allowance for certain inevitable consequences of existing organic and vascular damage, the recognition of the class of secondary anatomic lesions due to functional overstrain should represent a valuable advance in the study of diseases of the kidneys| The clinical application is also important; namely, that for the most part hypertension and nephritis are not inherently progressive but are permanently controllable by adequate sparing of function.

MEDICAL SCHOOL NOTES

Chancellor E. H. Lindley and the Board of Regents spent a day visiting the Medical School last month.

The new physio-therapy department of the Hospital will be opened in the near future. Most of the equipment is now in place and Miss Isabelle Rearick who will be in charge of this department is now studying under Dr. Elson, Professor of Physio-therapy in the University of Wisconsin.

Dr. O. S. Gilliland was elected Secretary of the Jackson County Medical Society at their last meeting.

Dr. M. J. Renner, '22, who has just completed his service as resident surgeon to the Cleveland General Hospital, visited the Medical School recently.

Dr. and Mrs. F. I. Wilson have announced the birth of a daughter. Mrs. Wilson was Dr. Hester Kaufman, '21.

Action of Pituitary Extract on the Uterus

The action of pituitary extract on the uterus, M. Pierce Rucker, Richmond, Va. (Journal A. M. A., Nov. 21, 1925), shows, is quite characteristic. It never gives contractions with periods of rest between, but always a continuous series of contractions with increase in intra-uterine pressure. This action was illustrated in a case of inevitable abortion in which labor was induced in the fourth month with a number 3 Voorhees bag. The patient was given one-fourth grain (0.0162 gm.) of morphin and 1-150 grain of atrophin at 1:30 p. m. At 8 p. m. she was having painless contractions of the uterus that averaged 10 mm. of mercury at intervals of two minutes. She was given 5 minims (0.3 c.c.) of pituitary extract subcutaneously. Five minutes later, there was a characteristic pituitary extract action. The contractions increased in height only very slightly but were continuous one after another, without any period of rest. Twenty-two minutes elapsed before there was the slightest pause between contractions. The intra-uterine pressure was increased 6 mm. of mercury. The patient still felt no pain. In other words, here was a dose so small (considering the stage of pregnancy) that is caused no action clinically, and yet it produced an incomplete tetanus of the uterus.

Achlorhydria Preceding Pernicious Anemia

The case reported by Mills Sturtevant, New York (Journal A. M. A., Nov. 21, 1925), is of more than fourteen years' duration, from the time of known achlorhydria to the onset of the symptoms of pernicious anemia. It is reported to be of longer duration than that of any case on record. This patient's symptoms of achylia began in 1899. In 1900, he was told he had achlorhydria. The sore mouth began in 1915. It was discovered that he had pernicious anemia early in 1916. It seems conclusive that the achylia had lasted over fourteen years when the anemia developed.

FOR SALE—Surgical practice hospital together with X-Ray machine. Property must be purchased. Practice long standing. Property excellent, close in.—In care of Journal.

FOR SALE—Central S. Dakota—General practice averaging $6,500.00 for ten years, with or without modern office building, county seat modern town of 1200. Main line railroad. Appointments transferable. Protestant not over 35 desired. Will sell all or one-half and other half in six months. Only first class man considered. Price upon application. Address Lang—in care of the Journal.

WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

RABIES VACCINE

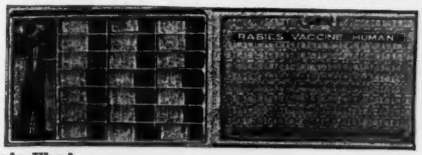
A PHENOL KILLED, STERILE PRODUCT

Thus possessing a valuable factor of safety.

Retains full potency for 90 days from date of production, thus permitting shipment of full treatment or even carrying a few treatments on hand.

Patient may continue regular work during treatment.

Marketed in 14 to 21 dose treatments.



Code Word

Rend — Complete Human Rabies treatment, 21 doses in vials, with one all-glass aseptic syringe and 2 needles.....$21.00

Rendall — Modified Human Rabies treatment, 14 doses in vials, with one all-glass aseptic syringe and 2 needles..... 14.00

Send for Literature

SHIPPING SERVICE

Maintained every hour of the year.

Accepted by the Council of Pharmacy and Chemistry of the American Medical Association.

Produced under U. S. Government License No. 85 by

JENSEN-SALSBERY LABORATORIES INC., KANSAS CITY, MO.

D-ZERTA is a sugar-free jelly powder, which simply by the addition of boiling water and subsequent cooling yields a tempting fruit flavored jelly. D-Zerta is appetizing in appearance, of appealing aroma and agreeable to the palate; a most delicious dessert especially recommended for the diet in diabetic and obesity cases.

20 SERVINGS—$1.00

Assorted flavors in each package

THE JELL-O COMPANY, Inc.

Le Roy, N. Y. Bridgeburg, Can.

D=Zerta

A Sugar-free Dessert

Grandview Sanitarium

KANSAS CITY, KANSAS

The Grandview Sanitarium was completely destroyed by fire; Fifteen years active work in the sanitarium business enabled us to know our needs for the future. We have planned, built and completed what we believe to be an ideal place and are open and ready for business. Thanking our friends for their patronage in the past and assuring you we are prepared to give as good service as can be had in any sanitarium, we remain,

Very truly yours,

S. S. GLASSCOCK, M.D., Res. Supt.

A. L. LUDWICK, A.M., M.D., Asst Supt.

EDITH GLASSCOCK, B.S.

Business Manager.

Office 910 Rialto Bldg., Kansas City, Mo.

Dr. Clyde O. Donaldson

Radium & X-Ray Laboratory

Special attention to treatment of malignancies

High Voltage X-Ray Equipment

Lathrop Building Kansas City, Mo.

HELIOTONE

A New Lamp at a New Price

"HELIOTONE" is built with a new type of base requiring no counterbalances, springs or coils to help with its adjustment. It may be raised from within a few inches from the floor to a height of 7 ft. without any lifting or pulling, simply turn the lever type arm to the required angle where it locks securely in place.

9CJ2385 HELIOTONE LAMP COMPLETE FOR 110 VOLTS A.C. OR D.C. $55.00

Mail This Coupon for Free Trial

FRANK S. BETZ COMPANY, Hammond, Indiana.
6-8 West 48th Street, New York City.
634 South Wabash Avenue, Chicago.
3213 Swiss Avenue, Dallas.

Please send your "Heliotone" Lamp circular explaining your special 30-day free trial introductory offer.

Name .....

Address .....

City ..... State .....

Tycos

FEVER THERMOMETERS

Real merit is found in these Fever Thermometers. Every one bears the name *Tycos*—the mark that tells you you are purchasing a certified thermometer. Insist on *Tycos*. Carried by all leading druggists.

Tycos Sphygmomanometer

(Actual Size of Instrument)

Self-Verifying $25.00 Complete

WRITE for Blood Pressure Manual and Bulletin No. 4 on the Analysis of Urine. These books cover their subjects thoroughly, and should be in every physician's library. Sent gratis.

Taylor Instrument Companies

ROCHESTER, N. Y., U. S. A.

Canadian Plant, Tycos Building, Toronto
Manufacturing Distributors in Great Britain, Short & Mason, Ltd., London

THERE IS A TYCOS OR TAYLOR TEMPERATURE INSTRUMENT FOR EVERY PURPOSE

Open All the Year
with Pluto Spring Flowing All the Time

French Lick Springs Hotel Co.

French Lick, Ind.

No Hospital

No Sanitorium

SIX HUNDRED AND FIFTY ROOMS (ALL OUTSIDE) IN OUR HOTEL

A place where your patients can find attractive surroundings with adequate medical service and supervision.

Dunning S. Wilson, M. D., Ky. U. of L., '99, is in charge of the Medical Department, which is equipped with complete X-ray, actinic ray, chemical and bacteriological laboratories for diagnostic and therapeutic work.

When your patients are tired of home or hospital send them to French Lick for final recuperation.
Write for Booklet.

Green Gables
THE DR. BENJ. F. BAILEY SANATORIUM
Lincoln, Neb.

This institution is the only one in the Central West with separate buildings situated in their own ample grounds, yet entirely distinct and rendering it possible to classify cases. The Main Building being fitted for and devoted to the treatment of non-contagious and non-mental diseases, no others being admitted. The other, Rest Cottage, being designed for and devoted to

THE EXCLUSIVE TREATMENT OF SELECT MENTAL AND NERVOUS CASES

requiring for a time watchful care and special nursing.

Send For Illustrated Pamphlet

BEVERLY FARM, Inc.

(Established 1897, Incorporated for Perpetuity 1922).

HOME and SCHOOL

for

Nervous and Backward Children

220 Acres—six buildings—capacity 80 children.

A School and Gymnasium Building Projected.

HABIT Training A Specialty.

Recent extensions admit accepting a few suitable permanent cases.

Terms on Application.

Address all communications to

Dr. Wm. H. C. Smith, Supt.,
Godfrey, Madison Co., Ill.

Dr. Groves B. Smith, Asst. Supt.
Theodore H. Smith, B. A., Secy.

Radium Hospital of Omaha

The records of the Radium Hospital of Omaha show that in cases of localized cancer of the lip and eyelid and other localized external forms of malignancy, the percentage of cases free from signs and symptoms of the disease after from three to ten years, in patients not dead of other diseases, is over 80 per cent. As many of these cases were recurrences after other less effective methods of treatment it seems reasonable to conclude that the intelligent use of radium by those having adequate quantities of the element and a high degree of skill in its use is the most effective weapon against localized cancer or sarcoma.

D. T. QUIGLEY, M.D.
Director
34th and Farnam Sts. Omaha, Neb.

What an Eminent Physician Says
about Gelatine in Milk for Infant Feeding

Dr. JOSEPH LEIDY, of Philadelphia, says: "The combination of Gelatine and milk in infant feeding was long used by my father and the late Dr. W. Pepper. I have continued to use it during the past thirty years, and am of the opinion that it gives results when many other combinations fail." *(Quoted by permission.)*

Thomas B. Downey, Ph. D., Fellow of Mellon Institute, Pittsburgh, has, by standard feeding test, determined that the addition of pure, plain unflavored Gelatine increases the nourishment obtainable from the milk by about 23%.

The approved method of combining Gelatine with milk is as follows:

Soak, for ten minutes, one level tablespoonful of pure, unflavored, unsweetened Gelatine in one-half cup of cold milk taken from the baby's formula; cover while soaking; then place the cup in boiling water, stirring until Gelatine is fully dissolved; add this dissolved Gelatine to the quart of cold milk or the regular formula.

Physicians are cautioned to prescribe only pure, unflavored and unsweetened Gelatine—the purest form of which is *Knox Sparkling Gelatine*—highest quality for health—produced by the most scientific methods, and under constant bacteriological and chemical laboratory control. It contains no artificial flavoring—no sweetening.

FREE—To Physicians and Hospitals

The Physician's reference book of nutritional diets with recipes will be sent free to physicians or hospitals, upon request, if they will address the Knox Gelatine Laboratories, 423 Knox Avenue, Johnstown, N. Y.

In addition to the family size packages of "Plain Sparkling" and "Sparkling Acidulated" (which latter contains a special envelope of lemon flavoring), Knox Sparkling Gelatine is put up in 1 and 5 pound cartons for special hospital use.

KNOX
SPARKLING
GELATINE

"The Highest Quality for Health"

Free from harmful acidity, artificial coloring, and synthetic flavoring.

The

Lattimore Laboratories

J. L. LATTIMORE, A. B., M. D., Director

Serology. Bacteriology. Pathology. Parasitology.

Basal Metabolism. Blood Chemistry. Carbon-Dioxide Combination.

Routine laboratory procedure. Rabies virus and diagnosis.

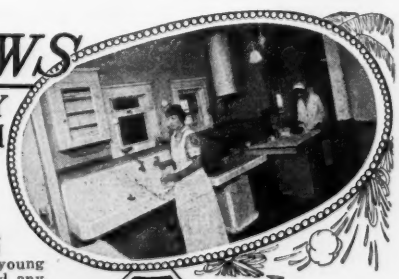
Containers furnished upon request. Wire report if desired.

Topeka, Kansas
J. L. Lattimore

El Dorado, Kansas
J. C. McComas

McAlester, Okla.
W. J. Dell

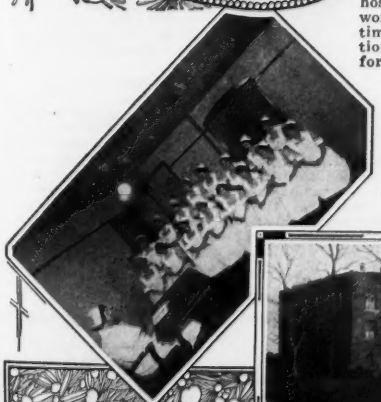
The WILLOWS
MATERNITY SANITARIUM

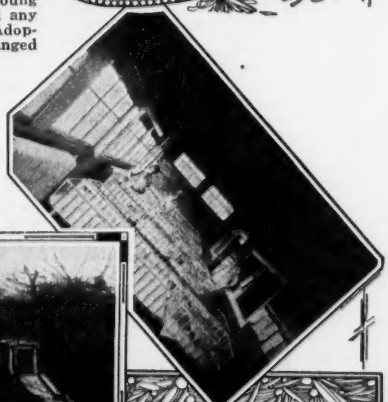


A superior seclusion maternity home and hospital for unfortunate young women. Patients accepted any time during gestation. Adoption of babies when arranged for. Prices reasonable.

Write for 90-page illustrated booklet.

The Willows
2929 Main St.
Kansas City, Mo.





Bigger and Better Than Ever

There are 1214 pages of text and 1069 original illustrations in the new

Sutton's (FIFTH REVISED AND ENLARGED EDITION)

DISEASES OF THE SKIN

RICHARD L. SUTTON, M.D., LL.D., F.R.S. (Edin.),

Professor of Dermatology, University of Kansas; Assistant Surgeon, U. S. Navy, retired; Member of the American Dermatological Association; Dermatologist to the Santa Fe Hospital Assn., and to the Christian Hospital, Kansas City, Mo., 1214 pages, 6½x10 inches, with 1069 illustrations and 11 full-page plates in colors. Fifth revised and enlarged edition. Price, silk cloth binding, $10.00.

FOR YOUR PATIENT'S SAKE—ADD THIS BOOK TC YOUR LIBRARY—AND CONSULT IT.

Avail yourself of the opportunity to have at hand at all times the teaching and the advice of one of America's formost dermatologists. Differential diagnosis with illustrations showing how closely different diseases may simulate each other, pathology gone into minutely and illustrated by cross sections of lesions that really illustrate and then suggestions, relative to treatment with formulas and prescriptions actually used by the author—these are the features that make this a really great book.

Leading Medical Authorities Everywhere Are Unanimous in Their Praise of This Book

The Lancet (London).

"The first edition appeared in 1916 and quickly won recognition for itself as one of the leading dermatological textbooks. The present volume is admirable in every way. It contains nearly a thousand photographic illustrations and 11 color plates. The photographs are excellent; we know of no other published collection that can compare with them. The text is worthy of the illustrations and has been brought thoroughly up-to-date without rendering the book unwieldly. To the advanced student and practitioner, if only for its wealth of illustrations, this book should make a strong appeal, and the dermatologist will regard it as a most valuable work of reference."

Archives of Dermatology and Syphilology:

"In this third edition Sutton has succeeded in presenting an eminently complete reference book on dermatology and syphiology. The completeness of the work is reflected in several ways; practically all recognized dermatoses are discussed..some briefly, others at length..according to their relative importance and frequency. The author has evidently spared no effort to present a thoroughly and eminently authoritative book destined to be of great value not only to the student and practitioner, but also to the research worker and writer."

Journal of Amer. Med. Ass'n.

"Dr. Sutton is one of the most indefatigable of American dermatologists; a treatise on dermatology naturally comes as a sequence of his labors. He has been an independent investigator, but his work has been constructive and not iconoclastic. As would be expected, therefore his treatise, while showing his independence of view, is along consrvative lines, and is free from the unpardonable sin in a textbook of being controversial. This work is well done and it is highly recommended for study to the practitioner who would obtain a grasp of the subject of dermatology as a whole, as distinguished from a smattering knowledge of a few dermatoses."

British Journal of Dermatology:

"Dr. Sutton's book is so well known and appreciated that nothing is wanting to recommend this new edition to those familiar with the earlier works. The illustrations are so numerous as to entitle the work to be classified as an atlas of skin diseases; in fact, there are few atlases which contain so complete a pictorial record of the whole field of dermotology. The author and publishers are to be congratulated not only on having secured such a large collection but on the excellence of their reproduction."

Don't Delay—Order This New Book Today

C. V. Mosby Co., Medical Publishers

3616 Washington Blvd., St. Louis, Mo.

Send for a copy of our new 96 page catalog.

Cut Here and Mail Today

C. V. MOSBY COMPANY,
Meropolitan Bldg., St. Louis, Mo.

Date.....

Send me a copy of the new fifth edition of Sutton's "Diseases of the Skin," for which I enclose $10.00, or you may charge to my account.

Name .....

Street .....

Town .....State.....

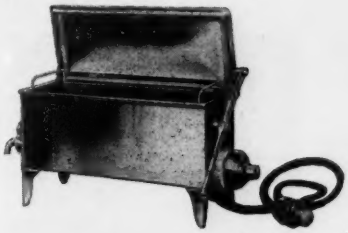
Your Ad

The Holidays are upon us once more and it is just as hard as ever to select the proper gift for your professional Friends

Come in or write and let us help you with your selections.

SUGGESTIONS

Boston bags, minor operating cases, floor lights, instrument stands, operating tables, cabinets, chair cushions, stools, blood pressure outfits, and Thereputiclights, and a complete line of glass ware.



Write for the descriptive literature and prices.

PHYSICIANS SUPPLY COMPANY

1007 Grand Ave.—Kansas City, Mo.

JAMES Y. SIMPSON, M. D.,
Neurologist and Addictologist

HERMON S. MAJOR, M. D.,
Neuro--Psychiatrist

SIMPSON-MAJOR SANITARIUM

3100 Euclid Avenue, Kansas City, Mo.

Nervous Diseases. Selected Mental Cases. Alcohol Drug and Tobacco Addictions

Electricity Heat Water Light Exercise Massage Rest Diet Medicine

Beautifully situated in a pleasant residence section of the city. Fully equipped and well heated. All pleasant outside rooms. Large Lawn and open and closed porches for exercises. Experienced and humane attendants. Liberal, nourishing diet. Resident physician in attendance day and night.

Trade Mark Registered **STORM** Trade Mark Registered

Binder and Abdominal Supporter

(Patented)

Trade Mark Registered

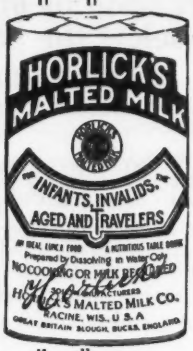
Trade Mark Registered

For men, Women and Children

For Ptosis, Hernia, Pregnancy, Obesity, Relaxed Sacro-Iliac Articulations, Floating Kidney, High and Low Operations, etc.

Ask for 36-page Illustrated Folder
Mail orders filled at Philadelphia only—within 24 hours.

KATHERINE L. STORM, M. D.
Originator, Patentee, Owner and Maker
1701 Diamond St. PhiladelPhia



HORLICK'S

The ORIGINAL Malted Milk

In the Dietetic Treatment of Influenza-Pneumonia

A very nutritious and sustaining diet during illness and a strengthening food-drink for the convalescing patient.

Avoid Imitations Samples Prepaid

Horlick's Malted Milk Co.
RACINE, WIS.

As a General Antiseptic

in place of

TINCTURE OF IODINE

Try

Mercurochrome-220 Soluble

(Dibrom-oxymercuri-fluorescein)
2% Solution

It stains, it penetrates, and it furnishes a deposit of the germicidal agent in the desired field.

It does not burn, irritate or injure tissue in any way.

Hynson, Westcott & Dunning

BALTIMORE, MD.

SAVE MONEY ON

YOUR X-RAY SUPPLIES

Get Our Price List and Discounts Before You Purchase

WE MAY SAVE YOU FROM 10% TO 25% ON X-RAY LABORATORY COST

Among the Many Articles Sold Are

X-RAY FILM, Duplitized or Dental, Eastman, Superspeed or Agfa Film. Heavy discounts on standard package lots. X-Ograph, Eastman, Justrite and Rubber Rim Dental Film, fast or slow emulsion.

BRADY'S POTTER BUCKY DIAPHRAGM insures finest radiographs on heavy parts, such as kidney, spine, gall-bladder or heads.
Curved Top Style—up to 17x17 size cassetts. $250.00
Flat Top Style—holds up to 11x14 Cassetts. 175.00

DEVELOPING TANKS, 4, 5 or 6 compartment stone, will end your dark room troubles. Ship from Chicago, Brooklyn, Boston or Virginia. Many sizes of enameled steel tanks.

INTENSIFYING SCREENS—Patterson, T. E., or Buck X-Ograph Screens for fast exposure alone or mounted in Cassettes. Liberal discounts. All-metal cassettes. Several makes.

If you have a machine have us put your name on our mailing list.

Geo. W. BRADY & CO.
785 So. Western Ave.
CHICAGO

CYSTOSCOPIC X-RAY TABLE

Designed by Dr. J. Bentley Squier for Cystoscopic examinations, combined with Wappler Balanced Bucky Diaphragm, making the most complete and convenient table for Radiography of the Genito Urinary Tract. Excellent pictures can be taken, stereoscopic pictures are possible; the Table conforms admirably to all Cystoscopic requirements.

HETTINGER BROS.

KANSAS CITY
ST. LOUIS HB TULSA
OKLAHOMA CITY

Send for Special Bulletin No. 105

The Management of an Infant's Diet

Malnutrition, Marasmus, Infantile Atrophy, Athrepsia

Mellin's Food	**8 level tablespoonfuls**
Skimmed Milk (1% fat)	**9 fluidounces**
Water	**15 fluidounces**

This mixture contains 56.61 grams of carbohydrates, thus supplying material that is utilized rapidly for heat and energy. The predominating carbohydrate is MALTOSE, which has the highest point of assimilation of any of the sugars, is immediately available as fuel and may be safely given in comparatively large amounts. The daily intake of protein from the employment of this formula is 15.54 grams, an amount calculated to be sufficient to replace depleted tissues and to provide for new growth. There is present in the mixture 4.32 grams of salts for replenishing inorganic elements.

The suggested modification furnishes nutrition in keeping with the character and amount of food elements best adapted to the particular demands of infants in an extreme state of emaciation and serves well as a starting point in attempting to meet the nutritive requirements of these undernourished babies.

Mellin's Food Co., 177 State Street Boston, Mass.

The Six-Sixty—

the Choice of the
PROFESSION

Since its introduction less than a full year ago, the Six-Sixty X-Ray generator has been taking the medical profession by storm.
WHY?

Because it gives greater uniformity and accuracy in diagnosis.

Because it so readily adapts itself to ALL classes of diagnostic work.

Because it has a greater tube life.

Because it provides for faster radiographic results.

Because it offers ALL the convenience and flexibility of the larger machines.

The remote control stand contains all meters, regulators and the timer. The transformer and rectifier unit is easily mounted on a shelf where space is limited. Investigate the Six-Sixty!

Write or Wire for Complete Details

W. A. Rosenthal X-Ray Company

412 East 10th St. **Kansas City, Mo.**
306 Medical Arts Bldg. **Oklahoma City, Okla.**

Pasteur Treatment 18 doses, ready for administration at the physician's office. Sent immediately with full directions, on receipt of telegram. Financial arrangements can be made later. Price $25. See Note.

Dependable Wassermann and other complement fixation tests, made with standardized reagents proper control and correct technic. Price $5.00. Syringes for collection of blood on application.

General Laboratory Work. Tissue examinations, $5.00 Autogenous vaccines, 20 C. C. in ampouls, $5.00, culture tubes sent on application. Urinalysis, Sputum examination, and Widal tests, $3.00. Guinea-pig inoculations for diagnosis of tuberculosis, including keeping and autopsy. $15.00.

NOTE. The virus for Pasteur Treatment deteriorates rapidly. We are not sub-agents for a virus of Eastern manufacture but supply you with a fresh virus manufactured by ourselves under U. S. Government License No. 49. Phone or telegraph orders to.

DR. W. T. McDOUGALL,
KANSAS CITY, KANSAS

Phone Drexel 0239
Phone Fairfax 0685

422 Brotherhood Block

The General Medical Profession

When you have patients who have eye trouble or need glasses, don't merely say, "Have your eyes examined," but advise them to consult AN OCULIST — EYE-PHYSICIAN and tell them WHY. You advise your patients to consult a dentist once a year, why not advise them to consult AN OCULIST once a year? Surely infected teeth do not cause any more constitutional disorders than EYE STRAIN. Your co-operation will be appreciated by your co-practitioner.

O. H. GERRY OPTICAL COMPANY

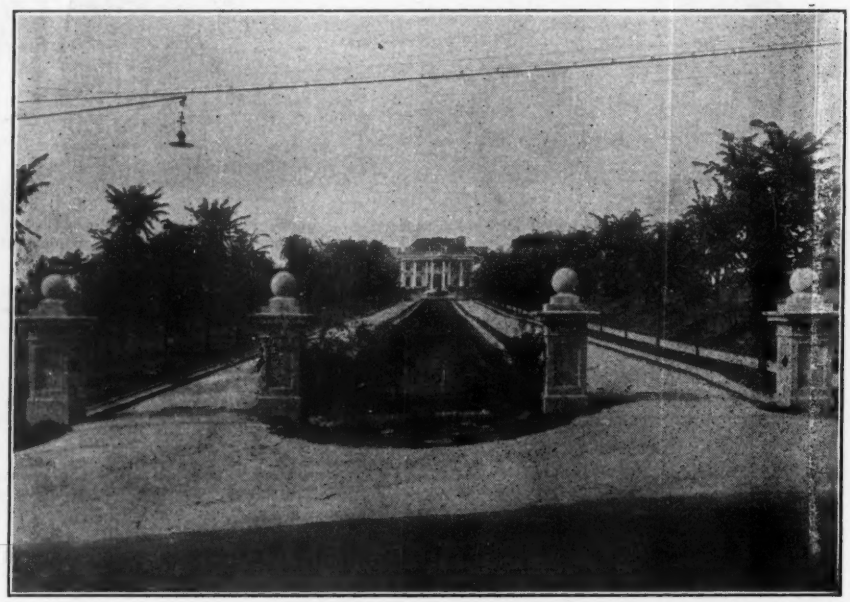
Optical Work for the Oculist Exclusively KANSAS CITY, MISSOURI

RADIUM FOR RENT

Radium loaned at very reasonable rates, and detailed information furnished as to how to apply it, to physicians desiring to treat their own patients with Radium. Send for descriptive literature describing our **Radium Rental Service** and the pamphlet "Indications for Radium Therapy."

QUINCY X-RAY & RADIUM LABORATORIES

731 Hampshire Street Quincy Ill.



Home of the

G. Wilse Robinson Sanitarium Co.

Kansas City, Missouri

8100 Independence Road — Office 937 Rialto Building

G. Wilse Robinson, M.D., Superintendent and Neuro-Psychiatrist
Dr. B. Landis, Resident Neuro-Psychiatrist

Nervous and Mental Diseases

Alcoholics and Drug Addicts
Will be received

The Sanitarium is located or a tract of twenty-five beautiful acres, in Kansas City, Missouri.

The buildings are commodious and of very attractive architecture.

Rooms with private bath can be provided.

The treatment embraces all of those therapeutic agents which Medical Science has determined to be most beneficial in the restoration of such patients as are received.

Recreation and entertainment are important factors in the rehabilitation of nervous and mental cases.

An indoor gymnasium, short golf course, tennis courts, croquet grounds, etc., will be available for the use of the patients.

The Sanitarium is twenty minutes drive from the Union Station and can be reached by automobile or the Kansas City-Independence line from the Union Station or Sheffield Station, Kansas City, Missouri or Independence, Missouri.

For further information communicate with the Superintendent at Office or Sanitarium.

AUTHORIZED PRODU

for the

PREVENTION & TREAT

of

SCARLET FEVER

E. R. SQUIBB & SONS, have been licensed by the Scarle
Committee, Inc., which administers the patents
Drs. George F. and Gladys H. Dick, to make and
AUTHORIZED SCARLET FEVER PROD

SCARLET FEVER ANTITOXIN
for treatment and passive immunity.

SCARLET FEVER TOXIN
for active immunity.

SCARLET FEVER TOXIN
for the Dick Test to determine immunity to Scarlet Fever.

Specify SQUIBB'S

[*Write for Full Information*]

E·R·SQUIBB & SONS, NEW
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESS

EDICAL SOCIETY

...rritorial Legislature of Kansas, February 19, 1859

...F. A. CARMICHAEL, M. D. ...OSAWATOMIE

...—Kansas City Treasurer—GEO. M. ...AY, Kansas City

...hairman; Dr. D. R. Stoner, Ellis; Dr. ... S. Kanney, ...utton; ...Dr. F. A. Carmichael, chairman, Osawatomie; Dr. D. ... Hassig, Kansas ...Kansas City; Dr. C. P. Davis, Topeka.

...Education—Dr. E. G. Brown, Chairman, Topeka; Dr. M. O. Nyberg, Wichita; ...City; Dr. H. E. Haskins, Kingman; Dr. C. D. Blake, Hays; Dr. L. B. Gloyne,

...Legislation—Dr. A. D. Gray, Chairman, Topeka; Dr. C. S. Huffman, Topeka; ...Dr. F. A. Carmichael, President ex-officio; Dr. J. F. Hassig, Secretary ex-

...ne—Dr. L. F. Barney, Chairman, Kansas City; Dr. E. D. Ebright, Wichita; ...Dr. Alfred O'Donnell, Ellsworth; Dr. F. A. Trump, Ottawa.

...y—Dr. Geo. M. Gray, Chairman, Kansas City; Dr. W. M. Mills, Topeka; Dr.

...—Dr. W. E. McVey, Chairman, Topeka; Dr. W. S. Lindsay, Topeka; Dr. O.

...Dr. J. F. Hassig, Chairman, Kansas City; Dr. H. L. Chambers, Lawrence; ...worth.

...E. E. Liggett, Chairman, Oswego; Dr. J. F. Hassig, Kansas City; Dr. W. E.

...ounty Societies are members of the Kansas Medical Society. Physicians residing ...ty Society exists may join the society of an adjoining county. Physicians residing ...exists, who are members of a district or other independent society approved by ...ted to membership.

...AL DUES $3.00, due on or before February 1st of each year.

...he Secretary of the Component County Society, or, if not a member of a County ...Society, to the Secretary of the Kansas Medical Society.

OFFICERSFOR 1925

...RESIDENT	SECRETARY	MEETINGS HELD
	P. S. Mitchell, Iola	
...er, Garnett	J. A. Milligan, Garnett	2nd Wednesday
...ess, Atchison	T. E. Horner, Atchison	1st Wed. ex. July and August
...n, Hoisington	C. W. Zugg, Great Bend	1st Tuesday, Jan., Apr., June, Oct.
...ings, Bronson	C. L. Mosley, Ft. Scott	2nd Monday
..., Horton	R. T. Nichols, Hiawatha	2nd Friday
...ureau, El Dorado	L. L. Williams, El Dorado	2nd Friday
...Carter, Wilson	Claire O'Donnell, Ellsworth	Dec., March, June, Sept.
C. Lowdermilk, Galena	W. H. Iliff, Baxter Springs	2nd Monday
E. Potter, Clifton	G. W. Bales, Clay Center	2nd Wednesday
...drew Struble, Glasco	R. E. Weaver, Concordia	Last Thursday
	A. B. McConnell, Burlington	
A. Tufts, Arkansas City	J. H. Douglass, Arkansas City	1st Tues. ex. July, Aug., Sept.
L. Church, Pittsburg	C. L. White, Pittsburg	3rd Thursday
N. Chaffee, Talmadge	T. R. Conklin, Jr., Abilene	
	W. M. Boone, Highland	1st Tues. Jan., Apr., July, Oct.
T. Jones, Lawrence	E. P. Sisson, Lawrence	1st Thursday
	F. L. Depew, Howard	Called
R. Hastings, Lakin	W. J. Stilson, Garden City	
L. McCarty, Dodge City	W. F. Pine, Dodge City	Last Wednesday
B. Gossett, Ottawa	F. A. Trump, Ottawa	
Galloway, Anthony	W. Cox, Anthony	3rd Wde., Mar., June, Sept., Dec.
McClymonds, Walton	H. M. Glover, Newton	1st Monday
Greenwood, Holton	C. A. Wyatt, Holton	1st Wed., Jan., Apr., July., Oct.
	E. A. Elliff, Burr Oak	
Lester, Olathe	E. E. Bronson, Olathe	
Springer, Kingman	H. E. Kaskins, Kingman	2nd Thursday ex. summer months
	J. D. Pace, Parsons	4th Wednesday
Axford, Lansing	J. L. Everhardy, Leavenworth	1st Monday
Hinkley, Barnard	M. Newlon, Lincoln	2nd Thursday
Shumway, Pleasanton	H. L. Clarke, LaCygne	2nd and 4th Fridays
	J. S. Fulton, Emporia	1st Tuesday
Taylor, Ramona	S. P. Loomis, Lost Springs	2nd Wednesday
	J. W. Randell, Marysville	Last Thurs., July, Oct., Jan., Apr.
Fee, Meade	J. W. Messersmith, Liberal	
Van Pelt, Paola	P. E. Kubitschek, Osawatomie	Last Friday
	E. E. Brewer, Beloit	
Coon, Caney	J. A. Pinkston, Independence	2nd Friday
berg, McPherson	L. F. Quantius, McPherson	
	S. Murdock, Sabetha	Last Thursday every other month
Boyster, Chanute	E. A. Davis, Chanute	Second Monday
Anneberger, Atwood	R. G. Breuer, Norton	Called
Ashall, Osborne	S. J. Schwaup, Osborne	
	A. E. Reed, Larned	2nd Tuesday
	L. C. Joslin, Cullison	1st Monday
Howart, Hutchinson	Louise Richmond, Hutchinson	4th Friday
Bergman, Scandia	H. D. Thomas, Belleville	2nd Thursday in November
Pride, Lyons	C. E. Fisher, Lyons	Last Thursday
Hazel, Manhattan	A. H. Bressler, Manhattan	2nd Monday
...ing, Salina	W. M. Sutton, Salina	2nd Thursday
...t, Wichita	G. E. Milbank, Wichita	1st and 3rd Tuesday
...rt, Topeka	E. G. Brown, Topeka	1st Monday
...ensington	H. Haecle, Athol	Called
...n, St. John	J. T. Scott, Stafford	2nd Wednesday
... Peck	W. H. Neel, Wellington	Last Thursday every quarter
	W. M. Earnest, Washington	
Altoona	E. C. Duncan, Fredonia	2nd Monday.
Center	M. S. Reynolds, Yates Center	
...as City	J. W. Sparks, Kansas City	Every 2nd Tues. ex. summer month